

**HEALTHCARE SERVICE ACCESS, SEXUAL AGGRESSION EXPERIENCES, AND HIV-RELATED
RISK BEHAVIORS AMONG PUERTO RICAN FEMALE INTRAVENOUS DRUG USERS**

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Female Intravenous Drug Users (IDUs) face numerous unique health risks and challenges, yet their singular experiences are rarely captured in research given how difficult these populations can be to reach. The purpose of this study was to gain a better understanding of the HIV-related sexual and drug use behaviors of, and to assess the experiences of access to healthcare services and of sexual aggression among female IDUs in Puerto Rico. In collaboration with community based and government organizations that provide drug outreach programs and addiction treatment services in Puerto Rico, a mixed-methods study, utilizing a transformative theoretical perspective, was completed utilizing surveys and semi-structured interviews as methods of inquiry. Ninety women who reported IDU within the last 12 months and who received services from one of the study recruitment venues were recruited to participate in the survey portion of the study. Additionally, 35 women who had previously completed the survey completed semi-structured interviews. Measures included sociodemographic characteristics, drug use, most recent/lifetime sexual behavior history, experiences of sexual violence, and access to and utilization of healthcare services, in addition to experiences seeking sexual health information. Data presented in this dissertation are explored in two manuscripts that address: 1) what sexual and drug use behaviors are most prevalent in this population; and 2) what Puerto Rican female IDU's experiences are when seeking healthcare services and sexual health information, and what barriers

are present for them in doing so. Findings provide a number of implications and considerations for future research and programs targeting female IDUs in Puerto Rico. Results suggest the need for a variety of services, including educational sexual health promotion interventions with a particular focus on how to access sexual health information and sexual violence counseling, as well as the inclusion of prevention interventions as part of existing drug treatment programs. Additionally, interventions that facilitate access and utilization of healthcare services, as well as measures to reduce stigma towards female IDUs on the island, should be explored.

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CHAPTER ONE

INTRODUCTION

Female Intravenous Drug Users (IDUs) face multiple gender-specific health risks and barriers to healthcare access, which may contribute to elevated rates of human immunodeficiency virus (HIV) for this population (Beyrer et al., 2012). IDUs are at increased risk of both HIV and STI infection and transmission, due to their sharing of contaminated needles and drug paraphernalia, along with other high-risk behaviors (Palamateer, Kimber, Hickman, Jutchinson, Rhodes, & Goldberg, 2010). Recent studies indicate that there are large populations of women who inject drugs and who are in need of improved health services, including HIV prevention (Magnus et al., 2013; Pinkham, Stoicescu, & Myers, 2012). When accessing healthcare services, this population confronts stigma due to their drug use and, as a result, faces many logistical barriers in obtaining needed treatment (Pinkham & Malinowska-Sempruch, 2008; Ahem, Stuber, & Galea, 2007)

In 2008, the Centers for Disease Control (CDC) reported that the annual rate of HIV diagnosis in the US for Hispanics/Latinos (25.0/100,000 population) was more than twice that for whites (8.2/100,000) (CDC, 2008). As in Sub-Saharan Africa, where AIDS continues to be one of the leading causes of death among those ages 25-44, in the Caribbean about 1.6 million people are estimated to be living with HIV, including 98,000 newly infected in 2012 (The Kaiser Family Foundation, 2013; UNAIDS, 2013). In 2011, approximately 1% of adults in the Caribbean were living with HIV, with sexual

transmission as the leading cause of the infection (Joint United Nations Program on HIV/AIDS, 2012).

In the US, Hispanics/Latinos account for 16% of the population, according to the most recent Census data (US Census Bureau, 2010). Puerto Rico, a commonwealth and unincorporated territory of the US, has a unique political landscape in the Caribbean. Puerto Ricans are the second largest Hispanic/Latino group in the US, and the population grew by 36% between 2000-2010, from 3.4 million to 4.6 million (US Census Bureau, 2010). Estimates suggest that there are as many Puerto Ricans living on the island as in the continental US, given historical circular migration patterns (Duany, 2002). Puerto Ricans have been found to have a higher susceptibility to infections, including HIV (Colon et al., 2001), and some of the worst overall health outcomes (Hajat, Lucas, & Kingston, 2000; Delgado, 2007; Zerden, Lopez, & Lundgren, 2012) among Hispanic/Latino ethnic groups in the US.

Puerto Rico is one of the HIV epicenters of the United States, and HIV rates for Puerto Rican IDUs are among the highest reported in any of the US states and territories (US Department of Health and Human Services, 2007). According to the CDC, Puerto Rico's AIDS rates (21.5/100,000) are among the highest among US states and territories (CDC, 2006; CDC, 2008). San Juan has one of the highest AIDS incidence rates among large metropolitan areas on the US. IDU and now heterosexual contact are the most common AIDS risk categories among Puerto Ricans both on the island of Puerto Rico and in the US mainland (Puerto Rico Health Department, 2010; Organista, 2007). The estimated lifetime risk (ELR) of HIV infection in Puerto Rico was 2.08%, which compares

to a 1.90% ELR among Hispanics/Latinos in 37 US states (CDC MMWR, 2010). In Puerto Rico, IDU has been noted as the key factor in HIV transmission (The Kaiser Family Foundation, 2008), and more than half of all AIDS cases reported on the island have been attributed to IDU (Deren, Kang, Colon, & Robles, 2003). Given the strong association of drug use with a variety of sexual behaviors, an understanding of the interplay between substance use and such behaviors is needed. Research has suggested that the entanglement of sexual behaviors with psychoactive agents may act as an obstacle in the process of successful substance use treatment (Rawson, 2002). Most studies focusing on Puerto Rican IDUs have primarily focused on large samples of men (Zerden et al., 2010). This is due in part to low service utilization among female IDUs on the island (Kang, Deren, & Colon, 2003), which makes them a harder to reach population.

Intimate partner violence (IPV) describes physical, sexual, or psychological harm by a current or former partner or spouse. IPV can occur within any relationship, regardless of intimacy status (CDC, 2010). Women with a history of IPV and sexual coercion are more likely to report engaging in high-risk behaviors such as unprotected intercourse and substance abuse, including IDU (Lang, 2011; Stockman et al., 2010; CDC, 2005). Previous research has suggested that women who have been both sexually coerced and struggled with substance abuse may feel more victimized than others because of lack of control due to intoxication and, in some cases, substance abuse itself may serve as a coping mechanism (Stockman et al., 2010).

Recent studies have suggested that sexual violence from a partner is a vulnerability factor for HIV infection in female IDU populations (El-Bassel, Gilbert, Witte, Wu, & Chang, 2011). Additionally, women living with HIV and experiencing IPV might be dependent on a partner for financial and transportation resources (Mouradian, 2000), further assuring their inability to seek the prevention and treatment services they require. The need for research that evaluates the context in which these violent experiences occur, including the relationship between attacker and victim, as well as specific measures on substance use at the time of the event, has been suggested (Stockman et al., 2010; Testa et al., 2003).

A synergistic “syndemic relationship” between violence, particularly sexual violence, and HIV, in which each influences the other to produce worse health outcomes than each might produce on their own has been alluded to in the literature (Meyer, 2011; Schafer, 2012). The intersection of HIV/AIDS, violence against women and gender-related health disparities has recently become the focus of national interagency prevention efforts. US President Barack Obama issued a Presidential Memorandum in 2012 to create a Federal Working Group with the aims of addressing this intersection and determining and addressing the barriers to care and prevention for violence and HIV to improve the lives of women (Interagency Federal Working Group Report, 2013).

In order to achieve a multidimensional understanding of the dynamics involved in high-risk drug use and sexual behavior, the integration of quantitative and qualitative methods can enhance comparability and understanding of findings (Deren et al., 2003). The consistent finding of greater HIV-related risk behaviors in Puerto Rico suggests that

issues in the environment and local factors, in terms of the availability of mechanisms to reduce risk, will continue to be factors, which must be assessed as influences (Deren et al., 2003; Zerden et al., 2010).

Justification of the Study

Current research on IDU populations has mainly focused on needle-sharing behaviors among IDUs in larger metropolitan areas in the US and abroad (Epele, 2002; Lally et al., 2008). Puerto Rico has significantly fewer drug treatment and health services available for substance users in comparison to services available in the mainland US (Zerden et al., 2010; Mino et al., 2006; Robles et al., 2003). Several studies comparing Puerto Rican IDUs living in the mainland US and in Puerto Rico suggest that, in comparison to those living in the mainland, Puerto Rican IDUs living on the island engage in higher levels of HIV-related high-risk behaviors (Deren et al., 2003a; Deren et al., 2003b; Deren et al., 2010; Zerden, Lopez, & Lungdren, 2010). One example is a study conducted by Lopez et al. (2008) comparing Puerto Rican IDUs in Puerto Rico to those living in Massachusetts. In this study, participants who resided in Puerto Rico were more likely to have ever shared needles with someone who was HIV positive and to report an overdose within the past year.

There is a need to address the sexual needs of IDUs in Puerto Rico beyond just high-risk behaviors, as well as the extent to which this population can successfully access and utilize healthcare and prevention services (Zerden, Lopez, & Lungdren, 2012). Particularly missing from the literature have been studies focusing on event-level sexual data and the context in which these experiences occur for female IDUs in Puerto Rico. It

is important to gather information on female IDUs' sexual health experiences, including information on experiences of sexual violence, and their access to healthcare services in order to better tailor prevention programs aimed at avoiding long-term negative health consequences from those experiences.

Study Purpose

The purpose of this study is to assess the prevalence of sexual and drug use behaviors, and, to assess the experiences of access to healthcare services and of sexual aggression among female IDUs in Puerto Rico. The specific aims of the project are: (1) to assess what sexual and drug use behaviors are most prevalent among female IDUs in Puerto Rico; (2) to acquire information on female IDUs' experiences when seeking healthcare services and what barriers are present for them in doing so; and (3) to explore female IDUs' experiences of sexual violence and their access to services after such experiences.

Research Questions

- 1) What drug use and sexual behaviors are most prevalent among female IDUs accessing preventative services in Puerto Rico, and what is the likelihood of these behaviors?
- 2) What factors facilitate or impair female IDUs' ability to access and successfully navigate the public healthcare system in Puerto Rico?
- 3) What are female IDUs' experiences of sexual violence, and how do these experiences interrelate with their drug use sexual behaviors and healthcare services utilization?
- 4) How do female IDUs' views and beliefs about their own sexual health affect their ability to access sexual health information?

CHAPTER TWO

SUMMARY OF THE EVIDENCE

The spread of HIV/AIDS is strongly influenced by the social, cultural, and political dimensions in which the disease is manifested. HIV transmission continues to disproportionately affect socially marginalized groups through injection drug use (IDU) and high-risk sexual behaviors (National Institute of Allergy and Infectious Diseases, 2008; National Institute of Drug Abuse, 2003). Estimates suggest that there are about 15.9 million IDUs worldwide (Mathers, Degenhardt, Phillips, Wiessing, Hickman, & Strathdee, 2008). The island of Puerto Rico, an incorporated U.S. territory and Commonwealth, is considered an HIV/AIDS epicenter (US Department of Health and Human Services, 2007), yet HIV/AIDS continues to be a highly stigmatized condition among Puerto Ricans (Malave-Rivera, Ortiz-Torres, & Varas-Diaz, 2012).

Several studies comparing Puerto Rican IDUs living in the mainland US and in Puerto Rico suggest that, in comparison to those living in the mainland, Puerto Rican IDUs living on the island engage in higher levels of HIV-related high-risk behaviors (Deren et al., 2003a; Deren et al., 2003b; Deren et al., 2010). Researchers on the island have highlighted the need to change cultural norms related to traditional gender and sexuality in order to reduce heterosexual HIV transmission (Malave-Rivera, Ortiz-Torres, & Varas-Diaz, 2012; Ortiz-Torres, Serrano-Garcia, & Torres Burgos, 2000).

Female IDU

Several studies have identified female drug users as being at particularly high risk of contracting HIV (Zerden et al., 2010; Delgado, Lundgren, Deshpande, Lonsdale, &

Purington, 2008; Evans et al., 2003). Previous studies have also noted a relationship between female gender and greater likelihood of needle sharing (Zerden, Lopez, & Lungdren, 2010; Evans et al., 2003; Johnson et al., 2002). A variety of social and cultural factors such as poverty, unemployment, and a lack of education may mediate and drive HIV risk for women. A recent study by Kang et al., comparing factors associated with drug treatment utilization among Puerto Rican drug users by gender, concluded that women were less likely than men to have ever been in outpatient or residential treatment for drug abuse and more likely to ever have had a physically abusive sexual partner in their life (Kang et al., 2009).

Risk Behaviors

Drug Use. IDUs in Puerto Rico have been found to mix different substances together, most commonly heroin and cocaine or “speedball” (Colon et al., 2001; Finlinson et al., 2006), which can bring additional drug associated risk behaviors. Additionally the use of xylazine or “anesthesia de caballo” [horse anesthesia], a non-opiate sedative analgesic and muscle relaxant, certified exclusively for veterinary use, has been reported among IDUs in Puerto Rico for several years (Torruella, 2011; Zerden, Lopez, & Lungdren, 2012). The use of xylazine in combination with “speedball” has been reported in the island, and its use has been associated with several additional health risks such as open skin ulcers and abscess wounds which can increase users’ risk for HIV infection (Torruella, 2011; Zerden et al., 2010; Rodriguez et al., 2008; Zerden, Lopez, & Lungdren, 2012). Additionally, several studies have found the connection between sex and drugs problematic for substance users in treatment and have suggested differences

by substance and gender (Rawson, 2002). Puerto Rico has significantly fewer drug treatment and health services available for substance users in comparison to services available in the US mainland (Zerden et al., 2010, Mino et al., 2006, Robles et al., 2003; Zerden, Lopez, & Lungdren, 2012). In a study of drug abuse and sexual performance among women El-Bassel et al., found that women in methadone treatment programs had varied experiences and impressions of how different drugs, particularly heroin and cocaine, affect their sexual libido, performance and pleasure (El-Bassel, 2003). Due to its sedative properties and analgesic effects, heroin has been used to self-medicate for sexual dysfunctions such as pain during intercourse for women (Buffum, 1998; El-Bassel, 2003). Cocaine, a central nervous system stimulant, has often been linked with heightened sexual desire and increased activity (Hudgins, McCusker & Stoddard, 1995). Like heroin, cocaine use may also contribute to sexual dysfunction, difficulty achieving orgasm and diminished sexual desire with long term use among women (Gold, 1997; Cocores, Miller, Pottash & Gold, 1988). Gender disparities in how drugs affect the sexual dynamics between drug-involved couples is believed to often lead to sexual coercion and physical abuse (El-Bassel, 2003).

Sexual Violence. Prevalence rates from the recent National Intimate Partner and Sexual Violence Survey show that women are victims of more than 4.2 million intimate-partner related physical assaults, rapes, and stalking incidents annually (Black et al., 2011; Roure, 2011; San Martin, 2003). Research on the topic of sexual and intimate partner violence (IPV) across populations is challenging due to the lack of clarity about the behaviors that constitute IPV. Intimate partner violence has long-term negative

health consequences for survivors, including physical and mental problems like depression and alcohol and drug abuse, even after the abuse has ended (Regeuira, 2004). These negative health consequences may be exacerbated in economically disadvantaged female IDU populations. Sexual violence also very often has severe negative impacts on the emotional and social wellbeing of the whole family, with adverse effects on parenting skills and on educational and employment outcomes (Itzin, Bailey, & Bentovim, 2008). In a previous US study on HIV risk behaviors among IDU adults in Washington DC, women were found to be more likely than men to have ever been emotionally or physically abused, as well as having been pressured or forced into sex, and had greater odds of having HIV-related risk factors (Magnus et al., 2013). In a 2003 study, Puerto Rico was found to have the sixth highest rate of femicide (female homicide) per one million among several countries in the Americas, and the 7th highest in the world, in addition to the second highest rate at 14.81 partner femicides per one million women over fourteen years (Roure, 2011; SanMartin, 2003).

Access to Services

As a result of injection use and needle sharing, many IDUs report a positive HIV status or test positive for Hepatitis B and C (Alter & Moyer, 1998; Lorvick et al., 2001). Female IDUs experience multiple barriers to HIV and STI testing and treatment (Lally et al., 2008), including transportation, discrimination, and stigma, which may hinder access to care (Drumm, et al., 2003; Merrill et al., 2002; Small, Van Borek, Fairbairn, Wodd, & Kerr, 2009; Wood, Kerr, Tyndall, & Montaner, 2008). Previous research has suggested that, given the alarming rates of homelessness, both in Puerto

Rico and in the mainland US, there is a need for tailored services that take into account both the social and environmental needs of IDUs in providing successful drug treatment and prevention services (Zerden et al., 2010). Compared to the mainland US, Puerto Rico seems to have limited service utilization and treatment options for IDUs, and the need for tailored HIV prevention and treatment efforts on the island has been suggested (Zerden et al., 2010).

Significance

There remains a current gap in the literature on the specific needs of female IDUs in Puerto Rico and the prevalence of sexual and drug use behaviors in addition to their facilitators and barriers to healthcare access and utilization. Previous studies have highlighted the need for more prevention and treatment options to be available to substance users throughout the island, including clean needle exchange programs that may help reduce the rates of overdose and HIV infection (Zerden, et al., 2010). Furthermore, there is an evident need for greater availability of sexual health information and the provision of comprehensive sexuality education on the island (Rodriguez-Diaz, 2013). Additionally, in order to better identify cultural perspectives and how Puerto Rican female IDUs' behaviors might differ from those found in other Latino IDU populations, the integration of quantitative and qualitative methods is necessary (Deren et al., 2003). In order to develop evidence-based HIV interventions that take into account sexual violence from a partner, further gender-specific research is needed, given the higher co-occurrence of such threats among women (El-Bassel et al., 2011).

A Transformative Theoretical Approach

This dissertation uses a transformative theoretical perspective, which has been previously used in multi- and mixed-method studies in order to advocate for social change, address social injustice, or give voice to marginalized and/or underrepresented groups (Creswell & Plano Clark, 2011; Mertens, 2003; Kumar et al., 2000; Mertens, 2010). This theoretical lens involves the integration of the transformative methodology into all phases of the research process, and thus the facilitation of social change for the marginalized community (Mertens 2003). Furthermore, Mertens (2010) states that “the transformative methodological belief system supports the use of a cyclical model in which community members are brought into the research process from the beginning and throughout in a variety of roles” (Mertens, 2010, p.472) until findings are disseminated back to the community where they can be most useful.

This approach has been used in research that prioritizes social justice and focuses on marginalized communities, such as Hispanic/Latino women (Cartwright, Schow, & Herrera, 2006), survivors of sexual assault (Filipas & Ullman, 2011) IDU populations (Kumar et al., 2000; Singer et al., 2005) and groups with lower socioeconomic status (Newman & Wyly, 2006). The transformative theoretical perspective involves the researcher being sensitive to the population under study and recommending specific changes as a result of the research to empower and improve social justice for the population (Mertens, 2003). Specifically, it requires the researcher to build trust with the community members and involve them throughout several stages of the research process, use mixed methodologies to capture the complexities of the

problem, focus on participants of groups associated with discrimination and oppression and use collection methods that are sensitive to the community's cultural contexts in order to frame and report the results in ways that facilitate social change and action (Creswell & Plano Clark, 2011). In a literature review of mixed methods studies that adopt a transformative theoretical approach, Sweetman, Badiee, & Creswell (2010) found that most studies used quantitative surveys and semi-structured interviews as part of their mixed methods designs.

Overall Summary of the Evidence

Women entering substance abuse treatment programs have been found to have a greater variety of psychological problems and a higher degree of addiction severity when compared to men (Stein & Cyr, 1997; Grella, Joshi, & Anglin, 2003; Kang, Deren, & Colon, 2009). Sexual violence from a partner has been identified as a vulnerability factor for HIV infection in female IDU populations (El-Bassel, Gilbert, Witte, Wu, & Chang, 2011). Research on IDU populations in Puerto Rico suggests there is a need for gender-specific research on health behaviors (Kang, Deren, & Colon, 2009), including sexual and drug-use behaviors. There is a need to address the sexual needs of IDUs in Puerto Rico and the extent to which this population can successfully access and utilize healthcare and prevention services (Zerden, Lopez, & Lungdren, 2012).

Researchers have previously been able to successfully collaborate with community-based drug outreach programs and methadone treatment centers (Lally, MacNevin, & Sergie, 2005; Lally et al., 2008; Spielberg, Kurth, Gorbach, & Goldblum, 2001) to reach IDU populations. Studies using a variety of inquiry methods are needed

in order to better understand the lived experiences of female IDUs on the island and how these experiences may be different from those of other IDU populations (Deren et al., 2003). Results from this study may be of interest to other researchers exploring the intersections of substance use and sexual behaviors among female IDUs or their experiences accessing healthcare services and sexual health information in Puerto Rico.

CHAPTER THREE

METHODS

Study Design

Current research on IDU populations has mainly focused on needle-sharing behaviors among IDUs in larger metropolitan areas in the US and abroad (Epele, 2002; Lally et al., 2008). Little research has been done on the unique sexual health needs of Puerto Rican female IDUs, and research with particular attention to event level and lifetime reports of sexual behaviors is especially lacking. In order to achieve a broader understanding of the experiences of female IDUs in Puerto Rico, this study incorporated both quantitative and qualitative approaches to explore the questions of interest. For a more complete understanding of the topic at hand, the researchers designed a multiphase study with an embedded concurrent transformative design (Creswell & Plano Clark, 2011). Embedded design refers to when a mixed-methods study designed using primarily a qualitative or a quantitative method embeds, as an enhancement, a smaller version of the other method, which can be concurrent or sequential into the overall design of the study (Creswell & Plano Clark, 2011).

Phase One of the study utilized a quantitative survey approach, while Phase Two used qualitative semi-structured interviews with a subsample of participants from Phase One. In this case, the qualitative data collected in Phase Two of the study is considered a secondary data set and was intended to enhance the findings by further exploring certain themes from Phase One. Participants for Phase Two were recruited using parallel mixed-methods sampling, where a subsample of those participating in Phase

One was invited to participate. Participants were invited until the recruitment goal was reached. The investigator collaborated with several community-based organizations (CBOs), including Iniciativa Comunitaria de Investigación (ICI) and Coalición de Servicios de Salud a la Mujer VIH, as well as a local health agency, Centro de Tratamiento y Administración de Servicios de Metadona (CTIAM), a part of Administración de Servicios de Salud y Contra la Adicción (ASSMCA) to assist with study design and implementation and with dissemination of findings. All study procedures were approved by the Indiana University Review Board.

Study Site

Iniciativa Comunitaria de Investigación (ICI), translated as Community Investigation Initiative, is a community-based organization that provides medical, social, and prevention services to individuals struggling with addiction and homelessness throughout the island of Puerto Rico. ICI operates in several locations throughout the island and includes HIV/STI treatment providers, rehabilitation and detoxification services for women, nutritional assistance services for homeless populations in the metropolitan area, one of the only operating clean-needle exchange programs available in the area, and year-round educational and drug outreach services. After initial recruitment efforts with ICI, it was clear that the scope of recruitment needed to expand in order to better reach our sample goals. For this reason, amendments to include further locations were made to the study protocol in order to expand our recruitment outcomes. The Coalición de Servicios de Salud a Mujer VIH, or HIV Women's Health Services Coalition, is a joint effort of public and private agencies that administer or

provide services to HIV-positive women in Puerto Rico. The Methadone Treatment Centers, called Centros de Tratamiento y Administración de Metadona (CTIAM), are the main providers of methadone-assisted drug-rehabilitation services on the island. Their clinics reach about 3000 men and women throughout the island daily.

Substance abuse treatment centers are an opportune site for reaching the IDU population, which is hard to reach in medical settings (Lally, MacNevin, & Sergie, 2005; Lally et al., 2008; Spielberg, Kurth, Gorbach, & Goldblum, 2001). Sampling occurred at the services clinic, detox center, and nutritional assistance program of ICI and five of the six active (CTIAM) clinics on the island, since this increased our likelihood of reaching the highest proportion of current (last 12 months) female IDUs. After consenting to participate in the study, participants completed an investigator-administered survey that, on average, took no more than 25-30 minutes to complete. After completion of the paper-based survey, participants were invited to participate in the second phase of the study. If they agreed to participate, then they were invited to participate in Phase Two, an audio-recorded interview with the investigator, in a private room at the clinic. Interviews lasted between 10 and 60 minutes.

Study Participants

To be eligible for this study, participants had to meet the following criteria: 1) be 18 years of age or older; 2) identify as female; 3) report current IDU status (defined as past 12 months); and 4) reside or receive healthcare services in Puerto Rico. A total of 90 participants, as of the date of this writing, consented to participate in the quantitative phase of this study. Participants were recruited to participate in Phase Two

of the survey immediately after completing Phase One. A total of 35 participants, a sample size common in previous qualitative IDU studies (Epele, 2002; Lally et al., 2008), consented to participate in the interviews collected during Phase Two of the study. Once the participant goal was reached, recruitment for this portion of the study ceased.

Participant Recruitment

This study utilized the core concepts of purposeful, convenient, voluntary sampling to identify participants for recruitment for the survey portion of the study. Participants were recruited from medical, social service, and drug rehabilitation providers on the island, a strategy which would yield the highest proportion of active or recently (last 12 months) active female IDUs. Previous studies with IDUs have used these settings as recruitment venues, given how hard these populations can be to reach (El-Bassel, Gilbert, Wu, Chang, & Fontdevila, 2007; El Bassel et al., 2005; El-Bassel et al., 2011). Fliers were put up in clinics and through services providers, and, physicians and case workers also referred participants who qualified to a private room in the clinic where study investigators then verified eligibility and administered consent. All materials were kept confidential and participants were encouraged to not provide their real names in order to ensure confidentiality and establish trust when talking about possibly incriminating behaviors.

A local research assistant with previous sexual health research experience on the island, Ilia Otero, was trained by the first author to administer the survey. After practicing administration of the survey to a fellow investigator several times, Ilia was then allowed to be in the room, with participant consent, while two surveys were

completed. This was done in order to ensure that all participants were administered the survey in the same manner. Ilia actively engaged in participant recruitment and independently administered a total of 33 surveys for Phase One of the study after Phase Two had been completed.

Instruments/Measures

Phase One: Survey Assessment. After initial eligibility criteria were confirmed, participants were then directed, either by staff or by the researcher, to a private room in the clinic in order to keep all details of the survey administration private. No personal identifiers were collected as part of the survey as a further precaution to ensure confidentiality, given the criminal nature of some of the issues contained within the survey. Along with written consent, participants were verbally reminded of the confidentiality of their information and their option to retire from the study at any time. As an incentive for their participation in the study, participants were given the choice of \$5 in cash or in the form of a Walmart gift card after they completed the survey. Additionally, participants who completed the survey received smaller versions of the study flier, printed as business cards, and were asked to let other eligible women know about the study and to invite them to participate.

In addition to sociodemographic characteristics, investigators included the following measures in the survey: the Drug Assessment Screening Tool (DAST-10)(Skinner, 1982, 1998), to measure current drug abuse levels; a modified version of the Sexual Experiences Survey – Short Form Victimization Scale (SES-SFV)(Koss, et al. 1982a, 1985b, 2007c) to capture information on lifetime sexually violent experiences;

and adapted measures on lifetime and most recent sexual behavior from the National Survey of Sexual Health and Behavior (Herbenick et al., 2010a, 2010b; Dodge et al., 2010). Event-level descriptions of the most recent sexual event include measures on behaviors engaged in, lubricant use, pain level, relationship to most recent partner, orgasm, and lubrication. In order to better capture additional information about other lifetime behaviors and healthcare service utilization, items on incarceration history, transactional sex, healthcare access, and HIV/STI testing and status measures were included as part of the survey.

Phase Two: Qualitative Interview. Participants who completed the survey were invited to participate in Phase Two, with participants being invited until the recruitment goal of 35 participants for Phase Two was completed. Similar sample sizes have been used with IDU populations accessing drug treatment services in the past (El-Bassel, Gilbert, Rajah, Foleno, & Frye, 2000; El-Bassel, Gilbert, Rajah, Foleno, & Frye, 2001). Those individuals who wished to participate were immediately interviewed following consent, in the same room where the survey was administered. During the course of the individual interviews, the investigator used a structured interview guide, developed by the researchers, and additional probes wherever necessary to facilitate discussion of key areas of interest within the study. Once the interview was completed, participants were paid \$10 cash and handed a four-page sexual health resources guide with contact information for numerous agencies and shelters on the island that provide sexual health services. Previous studies using a transformative approach have integrated providing their participants with a list of health resources in the community (Filipas &

Ullman, 2001), or HIV testing and counseling (Kumar et al., 2000), as a way of directly benefiting the community throughout the data collection process.

Study Limitations

Conducting a study of this scope required a well-coordinated approach to communication, partnership, and a shared vision for the potential power and significance of the findings. However, as with any research endeavor, there are several limitations to our interpretations of the findings. One limitation of this study is that its findings are based on cross-sectional data self-reported by female IDUs. No medical records were verified, nor did additional testing take place in order to verify participant responses. Participants were purposely recruited from service providers (medical, substance abuse, and prevention) in primarily metropolitan areas of Puerto Rico and most were receiving methadone maintenance treatment. Participants who were not seeking any type of service at the time may have had different responses to many of the items measuring healthcare access and utilization, for instance.

The sensitive nature of the study may have led it to be influenced by socially desirable response bias and/or perceived stigma from the investigators. Numerous measures, including using a native Spanish speaking female investigator for both phases of data collection, were put in place to ensure participant comfort and ease, but the face-to-face format of data collection may have affected participant responses. Additionally, information related to injection patterns, needle sharing, and partner HIV/STI status was not collected as part of this study. The size of our sample limited the scope of analysis and the potential to observe further differences among

subpopulations within the study. In particular, results from the second phase of the study are meant to be exploratory and increase our understanding of present issues in this population. Lastly, another limitation of this study was the time required to identify and recruit eligible women, given the differing attendance rates for women across clinics. As a result, recruitment for the study occurred in waves as attendance allowed.

Data Management and Analysis

Phase One. All data for this phase of the study were collected using an interviewer-administered, paper-based survey. Descriptive statistics were utilized to assess participant characteristics and lifetime reports of drug use, sexual behaviors, and experiences of sexual violence. Frequencies, independent sample t-tests, and crosstabs were used when appropriate to illustrate patterns within the data. Given the relatively small sample size of this exploratory study, only bivariate analyses were performed. Data were analyzed using the statistical software package SPSS Version 21.0 (SPSS Inc, Chicago, IL, USA, 2012).

Phase Two. All interviews were audio recorded without any subject names or identifiers, then transcribed verbatim. Transcriptions were then double-checked against the recordings. Data were organized and coded using NVIVO Version 10. A coding scheme was developed based on prior exploration of the literature, population, and interview guide. Most codes included emergent themes. Two researchers independently coded the transcribed interviews and discussed any coding ambiguities to ensure concordance. All interviews were reviewed a final time to ensure the accuracy and reliability of the final set of codes. Once all transcripts were coded, passages with

individual themes were extracted from the data and further analyzed in light of other similar codes using a transformative theoretical perspective (Creswell & Plano Clark, 2011; Merteens, 2003) and with the aims of giving a voice to a marginalized population and illustrate the complexities of female IDUs experiences accessing health services and sexual health information. Illustrative quotes from the main themes found were extracted and then translated, in order to facilitate presentation and understanding of the data.

CHAPTER FOUR

MANUSCRIPT ONE

Sexual Behaviors, Experiences of Sexual Violence, and Substance Use among Female Intravenous Drug Users (IDUs) Accessing Health and Prevention Services in Puerto Rico

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ABSTRACT

Purpose: Female intravenous drug users (IDUs) face numerous gender-specific health risks, all of which increase their susceptibility to potential adverse health outcomes, including violence. There is a need for further research on female IDUs to capture their unique experiences and understand behavioral and gender-based differences. The aims of this study are to understand what drug use and sexual behaviors are most prevalent among female IDUs accessing health services in Puerto Rico as well as to gather preliminary information on their experiences of sexual violence.

Methods: Utilizing a transformative theoretical perspective, a mixed-methods study was conducted with Puerto Rican female IDUs. A sample of 90 women who reported recent IDU (past 12 months) completed an interviewer-administered survey on topics regarding sexual behaviors, drug use, experiences of sexual violence, and access to healthcare services.

Findings: Results indicate that female IDUs engage in a variety of sexual behaviors throughout the lifespan and at last sexual event. There were significant differences across age groups for participants in time of last sexual event ($p=0.007$), partner's sex ($p=0.039$), relationship with partner ($p=0.023$), contraception method used ($p=0.057$), and reports of partner orgasm ($p=0.055$). More than half of all participants reported lifetime experiences of sexual violence.

Conclusions: This study extends the literature on IDUs in Puerto Rico by underscoring the diversity of female IDUs sexual experiences and sexual needs as well as illustrating how those experiences are mediated by drug use. Findings highlight the need for further

research on female IDUs in Puerto Rico in order to gain a better understanding of how to develop programs and how to include sexual violence prevention as part of future interventions with this population.

INTRODUCTION

Female intravenous drug users (IDUs) face numerous gender-specific health risks, all of which increase their susceptibility to potential adverse health outcomes, including violence. Various studies have found women entering substance abuse treatment to have a greater variety of psychological problems and higher degree of addiction severity when compared to men (Stein & Cyr, 1997; Grella, Joshi, & Anglin, 2003; Kang, Deren, & Colon, 2009). Heroin and cocaine, the most commonly used drugs among Puerto Rican IDUs may contribute to sexual dysfunction, difficulty achieving orgasm and diminished sexual desire with long term use, particularly among women (Gold, 1997; Cocores, Miller, Pottash & Gold, 1988, El-Bassel, 2003). Gender disparities in how drugs affect the sexual dynamics between drug-involved couples is believed to often lead to sexual coercion and physical abuse (El-Bassel, 2003).

In a previous US study of HIV risk behaviors of IDU adults in Washington, DC, women were found to be more likely than men to have ever been emotionally or physically abused as well as to have been pressured or forced into sex, and had greater odds of having HIV-related risk factors (Magnus et al., 2013).

The Centers for Disease Control (CDC) reported that the annual rate of HIV diagnosis in the US for Hispanics/Latinos (25.0/100,000 population) was more than twice that for whites (8.2/100,000 population) (CDC, 2008). The Caribbean remains heavily impacted by the HIV/AIDS epidemic, with 1% of the adult population living with HIV by 2011 (Joint United Nations Programme on HIV/AIDS, 2012). It has been estimated that over half of all AIDS cases in Puerto Rico have been directly traced to

injection drug use (Zerden, Lopez, & Lungdren, 2010; Puerto Rico Health Department, 2010; Organista, 2007). Several studies comparing Puerto Rican IDUs living in the mainland US and in Puerto Rico suggest that, in comparison to those living in the mainland, Puerto Rican IDUs living on the island engage in higher levels of HIV-related risk behaviors (Deren et al., 2003a; Deren et al., 2003b; Deren et al., 2010; Zerden, Lopez, & Lungdren, 2010).

San Juan, Puerto Rico, has one of the highest AIDS incidence rates among large metropolitan areas in the US. Injection drug use and unprotected sexual behavior are the most common AIDS risk categories among Puerto Ricans both on the island and in the US mainland (Puerto Rico Health Department, 2010). Additionally, both male and female IDUs in Puerto Rico were also more likely to engage in HIV-related risk behaviors and less likely to use risk-reduction programs such as methadone treatment or needle-exchange programs (Finlinson, 2006).

Currently, little is known about Puerto Rican female IDUs drug use, sexual behaviors, and experiences of sexual violence. The aim of this study is to understand what range of drug use and sexual behaviors are most prevalent among female IDUs accessing preventative health services in Puerto Rico. Additionally, this study adds to the literature on female IDUs, with preliminary data on the participants' experiences of sexual violence, as well as drug use and service utilization after such experiences.

METHODS

Study Design

The data presented here were collected as part of a larger mixed-methods study to assess female IDUs' drug use and sexual history, sexual health issues, experiences of sexual violence, and access to healthcare services. A total of 90 adult women with current IDU status (past 12 months), accessing services from diverse prevention and drug rehabilitation and treatment service providers on the island, participated in the survey portion of the study. Participants were recruited between July 2013 and February 2014 from three service providers within Iniciativa Comunitaria de Investigación (ICI) (Compromiso de Vida, Nuestra Casa, & Punto Fijo) and five of the six public methadone rehabilitation treatment centers on the island (Bayamon, Caguas, Cayey, San Juan, and Ponce).

This study used a transformative theoretical approach, previously used in multi- and mixed-method studies in order to advocate for social change, address social injustice, or give voice to marginalized and/or underrepresented groups (Creswell & Plano Clark, 2011; Mertens, 2003; Kumar et al., 2000; Mertens, 2010). The transformative theoretical perspective requires sensitivity to the population under study and recommendations of specific changes as a result of the research in order to empower and improve social justice for the population (Mertens, 2003). Specifically, it requires the researcher to build trust with the community members and involve them throughout several stages of the research process, use mixed methodologies to capture the complexities of the problem, focus on participants of groups associated with

discrimination and oppression and use collection methods that are sensitive to the community's cultural contexts in order to frame and report the results in ways that facilitate social change and action (Creswell & Plano Clark, 2011). Following these recommendations, the authors collaborated directly with community members and service providers in the development and implementation of the study, focused on an underrepresented group, Puerto Rican female IDUs, and were sensitive to the specific language and cultural needs of the group throughout the data collection process in addition to analyzing collected data and sharing results and recommendations with community members to empower participants and bring about needed changes. The primary author's Institutional Review Board approved all study protocols.

Participant Recruitment

This study utilized the core concepts of purposeful, convenient, voluntary sampling to identify participants for recruitment. Participants were recruited from waiting areas at methadone treatment clinics and while accessing services such as drug rehabilitation treatment and needle-exchange programs. A combination of referrals from medical personnel and recruitment fliers, as well as snowball sampling methods, was used to recruit the largest possible number of women for the study. Previous studies with IDUs have used these settings as recruitment venues, given how hard these populations can be to reach (El-Bassel, Gilbert, Wu, Chang, & Fontdevila, 2007; El Bassel et al., 2005; El-Bassel et al., 2011). Participants were eligible to be interviewed if they identified as female, over the age of 18, self-reported IDU in the past 12 months, and were accessing services from one of the recruitment venues at the time of the study.

Data Collection

After initial eligibility criteria were confirmed, participants were then directed by the researcher to a private room in the clinic, in order to keep all details of the survey administration private. As a further precaution to ensure confidentiality, no personal identifiers were collected as part of the survey, given the criminal nature of some of the issues contained within the questions. Along with written consent, participants were verbally reminded of the confidentiality of their information and their option to retire from the study at any time. As an incentive for their participation in the study, participants were given the choice of \$5 cash or in the form of a Walmart gift card after they completed the survey. Additionally, participants who completed the survey received smaller versions of the study flier, printed as business cards, and were asked to let other eligible women know about the study to invite them to participate. For most participants, the survey took 20-30 minutes to complete.

Measures

Sociodemographic characteristics. Demographic information collected as part of the survey included measures of age, town of residence, education level, employment status, income, sexual orientation, relationship status, and further measures on housing and dependents.

Lifetime Sexual Behaviors and Most Recent Sexual Event. Adapted measures on sexual behavior from the National Survey of Sexual Health and Behavior (Herbenick et al., 2010a, 2010b; Dodge et al., 2010) were included in the survey to capture information on lifetime and most recent sexual events. Event-level descriptions of the

most recent sexual event included measures on behaviors engaged in, contraceptive use, pain level, relationship to most recent partner, orgasm, and lubricant use. In order to better capture additional information on life experiences and service utilization, items measuring incarceration history, transactional sex, healthcare access, and HIV/STI testing and status were included as part of the survey.

Experiences of Sexual Violence. Information on previous experiences of sexual violence was captured through a modified version of the Sexual Experiences Survey – Short Form Victimization Scale (SES-SFV) (Koss, et al. 1982a, 1987b, 2007c). These measures include the types of event that occurred against the participant’s will, whether the attacker was a dating or non-dating partner, and what tactics (force, threats, position of authority) the attacker used. Additionally, the survey included measures on the attacker’s sex, drug influence at time of event, and genital lacerations or pain as a result of the attack.

Drug Use. The Drug Assessment Screening Tool (DAST-10) (Skinner, 1982, 1998) and its longer versions have been previously used to detect and assess drug use and abuse (Skinner, 1982, 1998; French et al., 2000; Cavanaugh, Street, & Sullivan, 2011). The test consists of 10 items related to regret, problems, and illegal activities as a result of drug use and provides “yes” or “no” response options.

Utilization & Access to Healthcare Services. In order to understand participants’ health service needs, utilization, and previous experiences, the survey included questions related to current health insurance coverage, services received in the

past 12 months, HIV/STI status and testing, and primary medical provider, as well as previous experiences accessing healthcare services.

Analysis

Frequency distributions and summary measures were used to describe the study sample. Descriptive statistics were used to report frequencies of sexual behaviors, transactional sex, experiences of sexual violence, and drug use. Chi-squares and independent sample t-tests were used to assess differences between age groups in sociodemographic characteristics and sexual behavior variables pertaining to the most recent event. Given the relatively small sample size of this explorative study, only bivariate analyses were performed. All analyses were conducted using SPSS (version 21 SPSS INC., Chicago, IL, USA, 2012).

RESULTS

Sociodemographic characteristics

A total of 90 women, ranging in ages from 23-63, were included in these analyses. The majority of the sample reported that they were primarily residing in the metropolitan area (n=80, 89%), currently unemployed (n=86, 96%), and with a monthly income of less than \$1,000 USD (n=87, 97%). Most participants (n=74, 83%) reported that they had medical insurance under Puerto Rico's Medicaid Plan known locally as "La Reforma". About a quarter of the sample (n=23, 26%) reported an educational level greater than high school. The majority of the sample (n=59, 69%) identified their sexual orientation as heterosexual, while 25.9% (n=22) of the sample identified their sexual orientation as bisexual and 3.5% (n=3) identified their sexual orientation as homosexual.

There were significant differences in sexual orientation ($p=0.029$), among the participants based on age groups. More than half of all participants ($n=6$, 55%) in the youngest group, aged 23-30, identified their sexual orientation as bisexual. The sociodemographic characteristics of the sample, stratified by age, are presented in Table 1.

Sexual Behaviors

Lifetime

Participants' lifetime sexual behaviors are presented in Table 2. All women in this study reported being sexually active at least once in their lifetime. Approximately half of the total sample reported that they had never previously performed oral sex ($n=55$, 62%) or engaged in receptive oral sex ($n=48$, 54%) with another woman, and almost 75% ($n=64$) reported they had never performed oral-anal sex on anyone, male or female, in their lifetime. The behaviors most frequently reported by the women in the sample as having occurred in the past 30 days included: penile-vaginal penetration ($n=51$, 57%), oral sex performed on a man ($n=45$, 51%), oral sex received from a man ($n=41$, 46%), and genital rubbing with a partner ($n=41$, 46%). Approximately two thirds of the sample reported that they had been paid for sex, at some time in their lifetime, with money ($n=60$, 67%) or drugs ($n=47$, 53%). Less than 7% ($n=6$) of the sample reported ever having paid for sex themselves.

Most Recent Sexual Event

Participant accounts of their most recent sexual event, stratified by age, are presented in Table 3. More than half the sample ($n=47$, 53%) reported that the last time

they engaged on sexual activities was within the last week, and more than 70% of women performed oral sex (n=70, 79%), received oral sex (n=65, 74%), and/or engaged in vaginal intercourse (n=80, 90%) with a partner during their last event. The overwhelming majority of participants (n=84, 94%) reported their partner's sex as male and classified this partner as a spouse (n=48, 53%). Only about a quarter of participants (n=24, 28%) reported using a condom during their last sexual event while the majority (n=59, 69%) reported not using any form of contraception. In addition, most participants (n=62, 70%) reported drug use, and (n=43, 48%) reported their partner was using drugs as well during their most recent sexual event. There were significant differences across age groups for participants in time of last event ($p= 0.007$), partner's sex ($p= 0.039$), relationship with partner ($p= 0.023$), contraception method used ($p= 0.057$), and reports of partner orgasm ($p= 0.055$). Younger participants were more likely to have had sex within the last week, to have had a female sexual partner, to be married and to report partner orgasms while older participants were more likely than younger ones to have used some form of contraception during their last sexual event.

Lifetime Experiences of Sexual Violence

Participant reports of lifetime experiences sexual violence are presented in Table 4. A total of 50 women (56%) reported ever experiencing forceful unwanted sexual behaviors, with sexual touching (n=50, 56%) and penile-vaginal penetration (n=43, 48%) the most common unwanted sexual behaviors reported. Participants reported that these unwanted sexual behaviors had been most commonly forced by a non-dating partner through the use of threats and physical violence (n=35, 78%), as well as

continual arguments and pressure (n=32, 71%). Women reported their attackers were most commonly male (n=50, 94%) and in more than half of all reports participants stated that they (n=29, 55%) or their attacker (n=26, 50%) were under the influence of drugs during the attack. A little more than half of all women who reported sexually violent experiences in their lifetime reported genital lacerations or pain (n=28, 54%) as a result of the attack, and that they sought out help after the attack occurred (n=28, 54%), most commonly at the hospital or with a counselor.

Drug Use

Participants' IDU onset, current status, and DAST-10 scores are presented in Table 5. Measures from the DAST-10 revealed women in the study most commonly had substantial (n=48, 53%) or severe (n=32, 35%) problems with drug abuse, as measured by the DAST-10. Participants' age at first IDU ranged from 13-49 years. "Speedball," the combined injection of heroin and cocaine, was the most common substance used their first time injecting (n=45, 50%), followed by heroin (n=38, 42%). Participants most commonly reported that their last IDU event occurred a few months ago (n=43, 47%), and that on that occasion they injected themselves with "Speedball" (n=62, 68%).

Participant accounts of substance use in the past 12 months and past 30 days are reported in Table 6. Heroin (n=34, 38%), cocaine (n=31, 34%), and *ketamine*, locally known as "horse anesthesia" (n=30, 33%) were the substances most commonly reported by participants as used sometime in the past 12 months but not the past 30 days. During the previous 30 days, participants most commonly reported using nicotine (n=72, 80%), methadone (n=71, 79%), cocaine (n=54, 60%), and heroin (n=52, 58%).

DISCUSSION

This study is unique in that it focuses on the experiences of Puerto Rican female IDUs and their sexual behaviors, experiences of drug use, and sexual violence, in addition to access and utilization of healthcare services after sexually violent experiences. Results from the study suggest that female IDUs accessing health and drug treatment services in Puerto Rico engage in a wide range of sexual behaviors throughout the lifespan and could benefit from sexual health educational interventions as part of their drug treatment programs and services.

The variety of sexual behaviors described by participants, both in their lifetimes and most recent events suggest a need to provide preventative sexual health information on STI and HIV transmission for a variety of behaviors, not only penile-vaginal penetration. Although only two participants identified their last sexual partner as female, a far greater number of women in our study (25.9%) identified their sexual orientation as bisexual when compared with only 5.9% of women in a national probability sample of adults 18-59 in the United States (Herbenick, 2010a). This may have several implications for healthcare providers in terms of how sexual behaviors may be defined and operationalized between patients and doctors, since different behaviors may be involved depending on the patient's partner's sex (Sanders & Reinisch, 1999). It is important to highlight similarities around the last sexual event for women in this study pertaining to reports of participant and partner orgasm, where the event took place and relationship to sexual partner when compared to national rates in the National Survey of Sexual Health and Behavior (Herbenick, 2010a). Additionally a greater number of

women in this sample reported condom use during their last sexual event (27.9%) when compared with only 21.8% of women from a national probability sample of males and females 14-94 in the United States (Reece, 2010). Furthermore, given that the majority of the sample reported that drug use had occurred, by them or their partner, during their last sexual event, further research that evaluates new prevention measures for this population should take into account the presence of one or various substances during sexual events.

Many participants in this study reported having been paid for sex at some point in their lifetime and although not captured in the survey, many expressed that these were recurring experiences. Given the high levels of poverty and low educational levels reported by participants in this study, many female IDUs in Puerto Rico may view sex work as their only alternative for sustainability which may increase their level of risk to HIV (Pando et al., 2013), reduce the likelihood that they will use HIV testing and care services (King et al., 2013) and expose them to higher levels of stigma in their communities (Baral et al., 2014, Decker et al., 2012).

Findings from this study echo previous findings among IDU populations in methadone treatment samples in the US, where more than half of all participants (88%) reported physical and sexual IPV in their lifetime (El-Bassel et al., 2005) compared to 56% of women in this sample who reported sexually violent experiences in their lifetime most often with a non-dating partner. Prevention efforts and interventions targeted at female IDUs in Puerto Rico should include items related to preventing and managing violent situations with both dating and non-dating sexual partners while injecting drugs

and how to seek help after such experiences. These prevention efforts should include components related to identifying signs of violence in romantic relationships as well as recognizing and avoiding scenarios with the potential for sexually violent outcomes while high.

Previous studies comparing IDU populations in Puerto Rico and Massachusetts noted that those in Puerto Rico reported a mean age of first injection use at least two years younger (20.9) than those living in the US (22.4) (Zerden, Lopez, & Lungdren, 2010; Lopez, Zerden, Fitzgerald, & Lundgren, 2008), however, the mean age of first injection reported by participants in this study was 23.6 (SD= 8.067). As with previous studies on Puerto Rican IDU populations (Colon et al., 2001; Finlinson et al., 2006), many participants in this study reported commonly injecting themselves with a mix of drugs reflecting a complex, multidimensional poly-drug abuse problem. IDUs in Puerto Rico have been found to mix different substances together, most commonly “speedball” (Colon et al., 2001; Finlinson et al., 2006), which can bring additional associated drug risk behaviors. Previous studies have also highlighted participant accounts of the heroin available for consumption in Puerto Rico not being “pure” (Zerden, Lopez, & Lungdren, 2010), which may have potentially greater harmful health consequences when mixed with other substances for consumption. Further research into the chemical composition of drugs available illegally on the island is necessary in order to understand the possible side and long-term effects these may pose to users. Additionally, information on how these drugs interact with other substances is important, given how often they are mixed

for consumption (Colon et al., 2001; Finlinson et al., 2006), as also reported by participants in this study.

The results from this exploratory study should be interpreted in light of its limitations. Due to the relatively small sample size, we used bivariate analysis to preliminarily explore the data. Further research will involve multivariate analysis and comparisons by subgroups. Results from this study are only based on self-reported data. Additionally, the women who participated were at varying degrees of rehabilitation and, as such, their results might be different than for female IDUs past the rehabilitation stage or who do not seek healthcare services. Although participants were recruited from multiple locations across the island, the majority were receiving methadone maintenance treatment services in the metropolitan area. In spite of these limitations, this study adds to the literature on female IDUs' experiences in Puerto Rico by highlighting the wide range of sexual and drug use behaviors in which participants engaged. By acknowledging that female IDUs have diverse sexual experiences and understanding how those experiences are molded by drug use we can examine how to best reduce risk while promoting a healthy and positive approach to sexuality in the lives of female IDUs.

Conclusions

This study has allowed for the examination of a wide range of behaviors, including drug use, sexual behavior and experiences of sexual violence, of female IDUs throughout various geographic locations in Puerto Rico. Our findings provide medical professionals, preventive care providers and public health researchers in Puerto Rico

with much needed current behavioral information about the female IDU population in the island. This study extends the literature on IDUs in Puerto Rico by underscoring the diversity of female IDUs sexual experiences and sexual needs as well as illustrating how those experiences are mediated by drug use. Findings highlight the need for further research in order to gain a better understanding of how to tailor prevention programs to female IDUs and how to include sexual violence prevention as part of future prevention interventions. Efforts to reduce HIV risk behaviors and increase all women's ability to safely navigate their sexual lives remain critical in reducing the spread of HIV/AIDS and empowering this highly stigmatized group of female IDU to take control of their sexual health.

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Table 1. Sociodemographic Characteristics of the Sample Totals and by Age (N=90)

Sample Characteristics	Total	Age				P-value
	Sample	23-30	31-40	41-50	51-63	
	(N=90)	(n=11)	(n=39)	(n=28)	(n=12)	
	N (%)	n (%)	n (%)	n (%)	n (%)	
Area of Residence						.584
Metropolitan Area	80 (88.9)	10 (90.9)	34 (87.2)	24 (85.7)	12 (100.0)	
Non Metropolitan Area	10 (11.1)	1 (9.1)	5 (12.8)	4 (14.3)	-	
Education Level						.610
Elementary School	9 (10.0)	3 (27.3)	2 (5.1)	2 (7.1)	2 (16.7)	
Middle School	12 (13.3)	2 (18.2)	5 (12.8)	4 (14.3)	1 (8.3)	
Less than High School	14 (15.6)	1 (9.1)	9 (23.1)	2 (7.1)	2 (16.7)	
High School	32 (35.6)	3 (27.3)	14 (43.8)	11 (34.4)	4 (12.5)	
Some College	20 (22.2)	2 (18.2)	9 (23.1)	7 (25.0)	2 (16.7)	
Bachelor's Degree or Higher	3 (3.3)	-	-	2 (7.1)	1 (8.3)	
Employment Status						.673
Unemployed	86 (95.6)	11 (100.0)	36 (92.3)	28 (100.0)	11 (91.7)	
Part-Time	3 (3.3)	-	2 (5.1)	-	1 (8.3)	
Full Time	1 (1.1)	-	1 (2.6)	-	-	
Income (USD/month)						.654
Less than \$1,000	87 (96.7)	10 (90.9)	38 (97.4)	27 (96.4)	12 (100.0)	
1,000 – 3,0000	3 (3.3)	1 (9.1)	1 (2.6)	1 (3.6)	-	
Sexual Orientation						.029*
Homosexual/Gay	3 (3.5)	-	-	2 (7.4)	1 (8.3)	
Bisexual	22 (25.9)	6 (54.5)	11 (31.4)	5 (22.7)	-	
Heterosexual/Straight	59 (69.4)	5 (45.5)	24 (68.6)	20 (74.1)	10 (83.3)	
Asexual	1 (1.2)	-	-	-	1 (8.3)	
Relationship Status						.324
Single/Never Married	34 (39.1)	1 (11.1)	16 (41.0)	9 (33.3)	8 (66.7)	
Partnered	46 (52.9)	7 (77.8)	20 (51.3)	16 (59.3)	3 (25.0)	
Married	3 (3.4)	1 (11.1)	1 (2.6)	1 (3.7)	-	
Widowed	4 (4.6)	-	2 (5.1)	1 (3.7)	1 (8.3)	
Health Insurance						.691
Insured	74 (83.1)	10 (90.9)	32 (84.2)	21 (75.0)	11 (91.7)	
Uninsured	14 (15.7)	1 (9.1)	6 (15.8)	6 (21.4)	1 (8.3)	
HIV Status						.072
Positive	16 (18.0)	-	7 (18.4)	8 (28.6)	1 (8.3)	
Negative	72 (80.9)	11 (100)	31 (81.6)	20 (71.4)	10 (83.3)	
Unknown	1 (1.1)	-	-	-	1 (100.0)	
Homeless	18 (20.0)	3 (27.3)	8 (20.5)	4 (14.3)	3 (25.0)	.770

*P<0.05

Table 2.*Lifetime Sexual Behaviors & Experiences of Transactional Sex (N=90)*

	Past 30 Days	Past 3 Months	Past 12 Months	More than 1 Year	Never
	n (%)	n (%)	n (%)	n (%)	n (%)
Masturbation	26 (28.9)	9 (10)	4 (4.4)	17 (18.9)	34 (37.8)
Masturbation with a Partner	29 (32.2)	11 (12.2)	12 (13.5)	14 (15.6)	24 (26.7)
Genital Rubbing with a Partner	41 (46.1)	8 (9.0)	9 (10.1)	18 (20.2)	13 (14.6)
Received Oral Sex from a Woman	6 (6.7)	6 (6.7)	3 (3.4)	26 (29.2)	48 (53.9)
Received Oral Sex from a Man	41 (46.1)	13 (14.6)	10 (11.2)	24 (27.0)	1 (1.1)
Performed Oral Sex on a Man	45 (51.1)	11 (12.5)	8 (9.1)	18 (20.5)	6 (6.8)
Performed Oral Sex on a Woman	8 (9.0)	4 (4.5)	3 (3.4)	19 (21.3)	55 (61.8)
Penile-Vaginal Penetration	51 (57.3)	6 (6.7)	11 (12.4)	17 (19.1)	4 (4.5)
Penile-Anal Penetration	15 (16.9)	4 (4.5)	9 (10.1)	27 (30.3)	34 (38.2)
Performed Oral-Anal Sex on someone	8 (9.0)	4 (4.5)	1 (1.1)	12 (13.5)	64 (71.9)
Received Oral-Anal Sex from someone	24 (27.0)	9 (10.1)	4 (4.5)	14 (15.7)	38 (42.7)

Lifetime Experiences of Transactional Sex

	Lifetime n(%)	Never n(%)
Was Paid for Sex with: (n=89)		
Drugs	47 (52.8)	42 (47.2)
Money	60 (67.4)	29 (32.6)
Gifts	26 (29.2)	63 (70.8)
Housing/Shelter	22 (24.7)	67 (75.3)
Paid Someone for Sex with: (n=89)		
Drugs	4 (4.5)	85 (95.5)
Money	6 (6.7)	83 (93.2)
Gifts	2 (2.2)	87 (97.8)
Housing/Shelter	2 (2.2)	87 (97.8)

Table 3. *Most Recent Sexual Event Stratified by Age and Sample Totals (N=90)*

Sample Characteristics	Total Sample (N=90)	Age				P- value
	N (%)	23-30 (n=11) n (%)	31-40 (n=39) n (%)	41-50 (n=28) n (%)	51-63 (n=12) n (%)	
When was the most recent time you engaged in sexual activities with a partner?						.007*
Within the last week	47 (52.8)	6 (54.5)	29 (74.4)	8 (29.6)	4 (33.3)	
Within the last month	11 (12.4)	2 (18.2)	5 (12.8)	3 (11.1)	1 (8.3)	
Between 1 month & 1 year	17 (19.1)	3 (17.6)	3 (7.7)	8 (29.6)	3 (25.0)	
More than 1 year ago	14 (15.7)	-	2 (5.1)	8 (29.6)	4 (33.3)	
Which activities occurred?						
Performed Oral Sex	70 (78.7)	9 (81.8)	35 (89.7)	18 (66.7)	8 (66.7)	.100
Received Oral Sex	65 (73.9)	7 (63.6)	30 (78.9)	20 (74.1)	8 (66.7)	.699
Vaginal Sex (Penis, Fingers, Toys)	80 (89.9)	10 (90.9)	37 (94.9)	22 (81.5)	11 (91.7)	.359
Anal Sex (Penis, Fingers, Toys)	23 (25.8)	3 (27.3)	9 (23.1)	8 (29.6)	3 (25.0)	.946
Where did it take place?						.274
My House	44 (49.4)	5 (45.5)	19 (48.7)	15 (55.6)	5 (41.7)	
My Partner's House	28 (31.5)	5 (45.5)	12 (30.8)	8 (29.6)	3 (25.0)	
Other (Car/Motel/In Public)	17 (19.1)	1 (9.1)	8 (20.5)	5 (14.8)	4 (33.3)	
Partner's Sex						.039**
Male Partner	84 (94.4)	9 (81.8)	38 (97.4)	27(100)	10 (83.3)	
Female Partner	2 (2.2)	1 (9.1)	1 (2.6)	-	-	
Relationship to most recent sexual partner?						.023*
Boyfriend/Girlfriend	12 (13.3)	4 (36.3)	5 (12.8)	3 (11.1)	-	
Husband/Wife/Partner	48 (53.3)	5 (45.5)	24 (61.5)	14 (50.0)	5 (41.6)	
Someone I am dating	3 (3.4)	-	-	2 (7.4)	1 (8.3)	
Someone paid me for sex	13 (14.6)	1 (9.1)	8 (20.5)	3 (11.1)	1 (8.3)	
Friend/Other	13(15.4)	1 (9.1)	2 (5.1)	5 (17.9)	5 (41.6)	
Partner used medication to maintain erection						.321
Yes	5 (6.0)	-	2 (5.3)	1 (3.8)	2 (18.2)	
No	77 (91.7)	9 (100)	35 (92.1)	25 (96.2)	8 (72.7)	
Unsure	2 (2.4)	-	1 (2.6)	-	1 (9.1)	
Participant was using drugs	62 (69.7)	10 (90.9)	25 (64.1)	19 (70.4)	8 (66.7)	.395
Partner was using drugs	43 (48.3)	8 (72.7)	19 (48.7)	10 (37.0)	6 (50.0)	.260
Contraceptive Method Used						.057*
Yes (Condom)	24 (27.9)	2 (20.0)	8 (21.6)	10 (37.0)	4 (33.3)	
Yes (Other)	3(3.4)	-	1 (2.7)	-	2 (16.7)	
No	59 (68.6)	8 (80.0)	28 (75.7)	17 (63.0)	6(50)	
Lubricant Used	39 (44.3)	7 (63.6)	19 (50.0)	10 (37.0)	3 (25.0)	.207
Participant Orgasm	57 (64.8)	8 (72.7)	24 (63.2)	19 (70.4)	6 (50.0)	.600
Partner Orgasm	79 (89.8)	11 (100)	37 (97.4)	22 (81.5)	9 (75.0)	.055*
Pain Level						.898
Not Painful	64 (72.7)	9 (81.8)	26 (68.4)	21 (77.8)	8 (66.7)	
Moderate	15 (17.0)	1 (9.1)	7 (18.4)	4 (14.8)	3 (25.0)	
A Little Painful	4 (4.5)	1 (9.1)	2 (5.3)	1 (3.7)	-	
Very	3 (3.4)	-	2 (5.3)	-	1 (8.3)	
Extremely Painful	1 (1.1)	-	-	1 (3.7)	-	

*P<0.05, ** p<0.01

Table 4.*Experiences of Sexual Violence¹ (N=90)*

	n(%)
Forceful Unwanted Sexual Behaviors (n=90)	
Sexual Touching	50 (55.5)
Oral Sex	30 (33.3)
Anal Sex	26 (28.8)
Penile-Vaginal Penetration	43 (47.7)
Vaginal Penetration by an object	7 (7.7)
Forced by Dating Partner through: (n=22)	
Continual Arguments & Pressure	8 (36.4)
Abuse of Authority Position	6 (27.3)
Being Under Drug Influence/Unconscious	3 (13.6)
Threats & Physical Violence	4 (19.0)
Forced by Non-Dating Partner through (n=45)	
Continual Arguments & Pressure	32 (71.1)
Abuse of Authority Position	11 (24.4)
Being Under Drug Influence/Unconscious	17 (37.8)
Threats & Physical Violence	35 (77.8)
Attacker's Sex (n=53)	
Male	50 (94.3)
Female	2 (3.8)
Both Male & Female	1 (1.9)
Event Occurred Under Influence of Drugs (n=53)	
Participant	29 (54.7)
Attacker	26 (50.0)
Unsure	15 (28.8)
Genital Lacerations/Pain as result of attack (n=53)	28 (53.8)
Sought Help/Services after experience (n=53)	28 (53.8)

1. Measures from a modified version of the (SES-SFV)

Table 5. DAST-10, IDU Onset & Current Status(N=90)

	N (%)
DAST-10¹ Scores	
Low (1-2)	1 (1.1)
Intermediate (3-5)	9 (10.0)
Substantial (6-8)	48 (53.3)
Severe (9-10)	32 (35.5)
Age First IDU (M/SD= 23.60/8.067)	
13-15	13 (14.4)
16-20	26 (28.6)
21-25	18 (19.8)
26-30	16 (17.6)
31-35	10 (11.0)
36-40	2 (2.2)
41-49	5 (5.5)
Substance Used First IDU	
Cocaine	3 (3.33)
Heroin	38 (42.2)
'Speedball' (Heroin + Cocaine)	45 (50.0)
Other	4 (4.44)
Time Since Last IDU	
Hours	15 (16.6)
Days	15 (16.6)
Weeks	17 (18.8)
Months	43 (47.7)
Substance Used Last IDU	
Cocaine	6 (6.6)
Heroin	18 (20.0)
'Speedball' Heroin + Cocaine	62 (68.8)
Other	5 (5.5)

1. Results from Drug Abuse Screening Test (DAST-10)

Table 6. Drug Use Frequency, Past 12 Months & Past 30 Days (N=90)

	Past 12 Months	Past 30 Days
Substance	n (%)	n(%)
Alcohol	18 (20.0)	27 (30.0)
Nicotine	16 (17.8)	72 (80.0)
Antidepressants	13 (14.4)	23 (25.6)
Sedatives	18 (20.0)	49 (54.4)
Hallucinogens	1 (1.1)	-
Antipsychotics/Anticonvulsants	3 (3.3)	9 (10)
Cannabinoids	9 (10)	49 (53.8)
Inhalants	5 (5.6)	2 (2.2)
Dissociative Anesthetics	21 (23.3)	-
Ketamine 'Horse Anesthesia'	30 (33.3)	24 (26.7)
PCP/Angel Dust	2 (2.2)	-
Stimulants	20 (22.2)	3 (3.3)
Cocaine	31 (34.4)	54 (60.0)
Crack	23 (25.6)	37 (41.1)
Methamphetamines	7 (7.8)	2 (2.2)
Heroin	34 (37.8)	52 (57.8)
Methadone	10 (11.1)	71 (78.9)
Opium	10 (11.1)	3 (3.3)
Codeine	5 (5.6)	4 (4.4)
Morphine	12 (13.3)	8 (8.9)
Oxycodone	3 (3.3)	4 (4.4)
Vicodin	-	1 (1.1)
Buprenorphine	1 (1.1)	-

CHAPTER FIVE

MANUSCRIPT TWO

Sexual Health, Healthcare Access & Utilization Among Puerto Rican Female IDU

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ABSTRACT

Purpose: Despite the high prevalence of illnesses associated with intravenous drug use (IDU), recent studies show preventative care and access among this population remains low. There is a need to understand female IDUs experiences when accessing sexual health services in Puerto Rico, as well as their present barriers in accessing and utilizing health services and seeking sexual health information. This study aims to address this need, through a mixed-methods study of female IDUs accessing sexual health services in Puerto Rico

Methods: A mixed-methods study was conducted in Puerto Rico with female IDUs. A sub-sample of thirty-five participants who reported recent IDU (past 12 months), and who had also participated in the quantitative portion of the study, were interviewed on topics regarding healthcare service access and utilization as well as sexual health information seeking.

Findings: Results indicate that female IDUs in Puerto Rico seemed to struggle with their multiple coexisting roles and as a result assume different identities, at times conflicting, in order to navigate health services and get through drug rehabilitation. Participants in this study identified their own experiences as drug users, in addition to previous experiences of stigma when accessing services, as barriers to treatment access and utilization. Although many participants related no previous formal sexual health education, many were able to access sexual health information when needed and felt comfortable with their sexual identities.

Conclusions: Female IDUs in Puerto Rico face numerous complex challenges when accessing healthcare services and seeking sexual health information. Results from this study illustrate the importance of sexual health to the lives of female IDUs and how drug use and rehabilitation can mediate their understanding and experiences of sexuality. Findings suggest further studies and interventions that explore sexual health education in conjunction with drug treatment programs are warranted given the need for availability of reliable sexual health information and stigma reduction measures in this community.

INTRODUCTION

Female intravenous drug users (IDUs) face numerous adversities as a result of their status experiences as a marginalized group, and have been recognized as a “hidden population” that can be difficult to reach in a research setting (Small, 2009; Ground et al., 1992). Despite the high prevalence of illnesses associated with IDU (Garfein, Vlahov, Galai, Doherty, & Nelson, 1996; Tempalski, Lieb, Cleland, Cooper, Brady & Friedman, 2009) preventative care and access among this population remains low, including fewer outpatient medical visits (Heinzerling, Kral, Flynn et al., 2006; Chitwood, Sanchez, Comerford, & McCoy, 2001; French, McGeary, & Chitwood, 2000) and more emergency room utilization (McGeary & French, 2000). When accessing healthcare services, this population confronts stigma due to their drug use and, as a result, faces many logistical barriers in obtaining the treatment they need (Pinkham & Malinowska-Sempruch, 2008; Ahem, Stuber, & Galea, 2007). Women entering substance abuse treatment have been found to have a greater variety of psychological problems and degree addiction severity when compared to men (Stein & Cyr, 1997; Grella, Joshi, & Anglin, 2003; Kang, Deren, & Colon, 2009).

The island of Puerto Rico, an incorporated US territory and Commonwealth, is considered an HIV/AIDS epicenter (US Department of Health and Human Services, 2007), yet HIV/AIDS continues to be a highly stigmatized condition among Puerto Ricans (Varas-Diaz et al., 2012). In Puerto Rico, IDU has been noted as the key factor in HIV transmission (The Kaiser Family Foundation, 2008), and more than half of all AIDS cases reported in the island have been attributed to IDU (Deren et al., 2003a; Puerto Rico

Health Department, 2010). There is an evident need for greater availability of sexual health information and the provision of comprehensive sexuality education in the island (Rodriguez-Diaz, 2013).

Previous research has identified disparities in access to and healthcare utilization for IDUs living in Puerto Rico when compared to those living in the US. (Mino et al., 2006; Robles et al., 2003; Deren et al., 2003a, 2003b). Puerto Rico has significantly fewer drug treatment and health services available for substance users in comparison to services available in the mainland US (Zerden et al., 2010; Mino et al., 2006; Robles et al., 2003). There is a need to address the sexual needs of IDUs in Puerto Rico and the extent to which this population can successfully navigate healthcare and prevention services (Zerden, Lopez, & Lungdren, 2012).

This study aims to understand the experiences of female IDUs as they navigate the healthcare system. Additionally, this study will address the current need to, through analysis of qualitative data from a larger mixed methods study of female IDUs accessing sexual health services in Puerto Rico, understand their experiences and barriers in accessing and utilizing health services and seeking sexual health information.

METHODS

Study Design

The data presented here were collected as part of a mixed-methods study to assess female IDUs' drug use history, sexual health issues, experiences of sexual violence, and access to healthcare services. From a larger sample of 90 participants, the qualitative component of the study was conducted with 35 female IDUs accessing

services from diverse prevention and drug rehabilitation and treatment service providers on the island. Similar sample sizes have been used with IDU populations accessing drug treatment services in the past (El-Bassel, Gilbert, Rajah, Foleno, & Frye, 2000; El-Bassel, Gilbert, Rajah, Foleno & Frye, 2001). Participants were recruited between July 2013 and February 2014 from three service providers within Iniciativa Comunitaria de Investigación (ICI) (Compromiso de Vida, Nuestra Casa, and Punto Fijo) as well as five of the six public methadone rehabilitation treatment centers on the island (Bayamon, Caguas, Cayey, San Juan, and Ponce).

This study used a transformative theoretical approach, previously used in multi- and mixed-method studies in order to advocate for social change, address social injustice, or give voice to marginalized and/or underrepresented groups (Creswell & Plano Clark, 2011, Mertens 2003; Kumar et al., 2000; Mertens, 2010). The transformative approach requires the researcher to build trust with the community members and involve them throughout several stages of the research process, use mixed methodologies to capture the complexities of the problem, focus on participants of groups associated with discrimination and oppression and use collection methods that are sensitive to the community's cultural contexts in order to frame and report the results in ways that facilitate social change and action (Creswell & Plano Clark, 2011). Following these recommendations, the authors collaborated directly with community members and service providers in the development and implementation of the study, focused on an underrepresented group, Puerto Rican female IDUs, and were sensitive to the specific language and cultural needs of the group throughout the data collection

process in addition to analyzing collected data and sharing results and recommendations with community members to empower participants and bring about needed changes. The author's university Institutional Review Board (IRB) approved all protocols.

Participant Recruitment

Participants were recruited from waiting areas at methadone treatment clinics and while accessing services like rehabilitation and needle exchange. Previous studies with IDUs have used these settings as recruitment venues given how hard to reach these populations can be (El-Bassel, Gilbert, Wu, Chang, & Fontdevila, 2007; El Bassel et al., 2005; El-Bassel et al., 2011). A combination of referrals from medical personnel and recruitment fliers, as well as snowball sampling methods, was used to recruit the largest possible number of women for the study.

Participants were eligible to be interviewed if they identified as female, were over the age of 18, self-reported IDU in the past 12 months, were accessing services from one of the recruitment venues at the time of the study, and had participated on Phase One of the study. Phase One consisted of an interviewer-administered survey with measures on sociodemographic characteristics, sexual behaviors, drug use, experiences of sexual violence, and access to healthcare services, among others. Interviews were completed in suitable spaces (empty private offices) within the clinics and treatment centers in order to ensure participant confidentiality. Interviewers used a preliminary recruitment script and determined eligibility prior to starting the interview. If all eligibility criteria were met and participants expressed a desire to participate in the

study, then the semi-structured audio-recorded interviews would take place after consent was provided.

All interviews were anonymous, to ensure participant confidentiality, and lasted approximately 40 minutes on average. Interviews were conducted by a female native Spanish speaker interviewer and consisted of themes related to participants' personal experiences and interests, their previous experiences accessing healthcare services, and their overall sexual health. All participants who completed the interview were compensated with \$10 cash and received a sexual health resources guide with information on available shelters and service providers for women throughout the island. Previous studies using a transformative theoretical approach have integrated providing their participants with a list of health resources in the community (Filipas & Ullman, 2001), or HIV testing and counseling (Kumar et al., 2000), as a way of directly benefiting the community throughout the data collection process. Sampling continued until the 35 participant recruitment goals was reached, given previous studies with IDU populations that used similar sample sizes (El-Bassel, Gilbert, Rajah, Foleno, & Frye, 2000; El-Bassel, Gilbert, Rajah, Foleno, & Frye, 2001).

Study Instruments

A structured interview guide was developed to elicit responses from participants about their previous experiences accessing health services and sexual health information. The interview guide consisted of two main domains, with questions and content-specific probes. As the interviews progressed, additional probes were used to elicit extra information wherever necessary, although these were minimally used. In

addition to introductory questions regarding participants' current hobbies and future aspirations, the guide contained questions pertaining to participants' access to healthcare services, how their current insurance impacts their service access and utilization, and previous experiences navigating services. Additionally, the interview guide contained several questions related to participants' needs and concerns in relation to their sexual health, including comfort level, sexual health education, current sexual health information access, and an evaluation of sexual health, in relation to other health dimensions.

All participants who completed the interview had also previously completed an investigator-administered survey in Phase One. Additional questions captured in the survey and also pertaining to the current analysis addressed HIV/STI status and testing, and healthcare services utilized in the past 12 months, as well as positive and negative experiences trying to access services in the past.

Data Analysis

The interviews were digitally audio-recorded and transcribed verbatim, and the transcripts were then double-checked for accuracy against the recordings. Interview data from this study were analyzed using a transformative theoretical perspective (Mertens, 2003), with the intention of providing a voice to a marginalized population. Following the perspective, interviews were coded and concepts and themes that highlighted the complexities female IDUs experienced when accessing health services and seeking sexual health information emerged from the transcripts after careful evaluation. This involved multiple readings of each transcript, interview notes, and an

evaluation process via open and axial coding using NVIVO (Version 10) to organize concepts into themes. Open coding involved assigning conceptual codes to small words or sections within the interview transcript and was followed by axial coding where common and interrelated concepts were combined into themes for further analysis (Corbin & Strauss, 2008).

Coding was completed on all Spanish transcriptions and then independently verified by two native Spanish-speaking researchers. Once data analysis was completed, selected interview portions, which had been chosen to be highlighted in the discussion, were then translated into English and then back to Spanish to ensure a clear and consistent translation. Demographic data was used to provide further information on the social characteristics of the sample and wherever necessary statistical frequencies and descriptive analysis were conducted using SPSS (Version 21).

RESULTS

Sociodemographic Characteristics

A total of 35 interviews were conducted for this study. Participant sociodemographic characteristics are presented in Table 1. Participants ranged in age from 23 to 53 ($M=38.6$, $SD=8.2$), and the majority ($n=30$, 86%) reported the metropolitan area as their main area of residence. Overall, 66% ($n=23$) of participants reported their sexual orientation as heterosexual and 54% ($n=19$) identified the current relationship status as partnered. All participants reported current unemployment status and only 23% ($n=8$) of the sample reported a more advanced education than high school. More than 70% ($n=25$) of the sample reported some form of medical insurance

coverage, most commonly the public state health insurance or Medicaid known locally as 'La Reforma'. This health insurance plan, administered by *Triple S Salud* or *BlueCross Blue Shield of Puerto Rico* is available to all American citizens with little to no income, older adults, children and domestic violence survivors, among other groups of particular need. The plan offers low cost co-payments for a variety of health services and participants are encouraged to access all services through recommendations from a primary healthcare provider.

Only seven participants reported current positive HIV status. About half the sample (n=16, 46%) reported utilizing healthcare services in the past 12 months, and only nine participants (26%) reported past experiences of being denied services by a health provider and/or clinic.

Interview Themes

Three main themes were identified, as well as other various subthemes, that provided a framework for understanding Puerto Rican female IDUs' experiences navigating public healthcare on the island as well as observations on their own sexual health and access to sexual health information.

1. Women compartmentalize their identities in order to endure their current status as IDUs and envision a better future for themselves and their families.
2. Many structural, economic, and sociocultural barriers are present for women seeking healthcare and drug rehabilitation services on the island.
3. Female IDUs possess various levels of sexual health awareness and many are continuously striving to become better educated in order to successfully

navigate their sexual lives, even while dealing with the negative consequences of previous sexual misinformation.

In order to place these themes in context, we have organized the following subsections with translated verbatim examples demonstrating the participant's own voice and connections between the data. Spanish pseudonyms have been used to protect participant confidentiality.

Coexisting Identities

As part of their drug addiction and/or rehabilitation process, participants seemed to take on different identities and spoke differently of themselves at different points throughout the survey and interview process. Such identities included *drug addict*, *drug user in rehabilitation*, *mother*, *woman*, and *mentor*. For some participants, it seemed that thinking of themselves in this compartmentalized way helped them navigate this tumultuous time, particularly when accessing medical or drug rehabilitation services.

Current Status (Drug Addict/Recovering Drug Addict). Even when speaking about their personal interests, goals, and aspirations, many women seemed conflicted in their ability to lead a successful life during and after drug rehabilitation. It was clear that female IDUs in the study seem to take on diverse identities and struggle with the implications of them as a result, particularly in relationship to their current IDU status and future possible drug rehabilitation and independence. When reflecting on current hobbies and future aspirations in relation to a current IDU status, Andrea (29, Caguas) reported,

“Well, I enjoy helping people out a lot. I would like to study nursing but, because of my vice and all, well I still can’t. I want to get off [drugs] first and then be able to become a nurse, which is what I have always wanted and I have always, always, always loved... Right now, as a hobby, I can’t say that I do anything in particular to have fun...because...whenever someone is on drugs they don’t have a hobby...One only thinks about having fun and, well you know, the only thing you can think about is that [using drugs] and that and that, you understand?”

Woman/Mother (Personal Aspirations and Goals). Almost half the sample, 15 women, talked several times during the interview about their children and their identities as mothers. Although 15 women that they had children under the age of 18, only 7 participants said they currently live with or take care of their children. In most cases, motherhood, spending time with or getting to be with their children seemed to serve as a motivator in the pursuit of drug rehabilitation. Furthermore, lifetime experiences with substance abuse and the culture which it promotes have made women aware of the importance of keeping their children from being exposed to it or getting together with the “wrong groups” in this case associated with ‘reguetón’ music, as highlighted by Paula (40, Santurce):

“I am very enthusiastic about my boy wanting to become a neurosurgeon and if he is 15 and he wants to be a neurosurgeon and not a barber then for me that’s super... And he does not like ‘reguetón’, even better for me. So that really motivates me to be a better mother and a better example for him.”

For most participants, a feeling of guilt resulted from a lifetime of drug-related circumstances and the negative effects drug abuse can have on the family. For some, this feeling served as a motivator to continue treatment and carve a substance-free future for themselves. When talking about past regrets and future family aspirations, one participant reported the following:

“In spite of everything they [daughters] don’t feel embarrassed of me when they come see me because they know that when they were younger, I never put them at risk of something bad happening to them. On the contrary, I always protected them [daughters] in spite of my problems with drugs. They were never taken away by the court, I always had their custody and the only time I did not spend with them was because I was too much into drugs. And well my mom was able to take care of them for me....You know... I know a time will come when I will get out of here [Rehabilitation Clinic] and make a new life for myself...but then I will really start to gather information and be more careful.....[I would like to] Stop being the can that everyone kicks around so that my daughters may say ‘she was but no longer is’[an addict]” (Coral, 36, Arecibo)

In short, we found that female IDUs struggle with coming to terms with the many diverse dimensions of their identities during the recovery process. At the same time, many women have gained valuable knowledge from their experience as IDUs and use those experiences as motivation to excel in different dimensions of their lives and mend relationships with families and loved ones throughout their rehabilitation journey.

Barriers and Facilitators to Healthcare Access

Insurance and Structural Barriers to Care. All participants spoke of difficulties when navigating the public health system in Puerto Rico. All 25 participants who reported having some form of Insurance at the time of the interview were enrolled in Puerto Rico’s Medicaid Plan, locally known as ‘*La Reforma*’.

In addition to reports of lack of transportation services available to them in order to make appointments on time and economic difficulties in covering the costs of treatment and medications, the main difficulty reported by participants had to do with the many steps and processes involved in getting care during times of need as female IDUs.

“Well, I think that it [getting services through the public health insurance program ‘*La Reforma*’] is a problem because that...I can tell you that sometimes

they [service providers] treat you really well with 'La Reforma' but sometimes they don't want to see you with 'La Reforma' because 'That is not covered', 'you have to pay a deductible', and it becomes very difficult for people like me who don't have a stable income.... when you don't have enough [money] for yourself you don't have enough for a deductible. And sometimes you are asked to pay the deductible and sometimes you are not, at the same doctor..." (Sandra, 48, Bayamon)

Addiction and Drug Use as Barriers to Care. Some participants reported not knowing how to access services and lacked the self-motivation to seek them when dealing with the many side effects of addiction to multiple substances. Participants often spoke of how difficult the first step towards rehabilitation is:

"I don't even know how I would [seek treatment or health services] if I am currently using drugs. I mean, I have not been able to get help. As you can see now I am here [in a drug rehabilitation clinic] to see if I can finally abandon drugs completely. But...sometimes it's hard for people to get it [treatment or health services]... sometimes you have to do things you don't want to do." (Veronica, 53, San Juan)

Felt Stigma When Seeking Healthcare Services. All participants were very aware of the negative social perceptions around IDU and related on numerous occasions how such stigma affected their desire to seek care and the attention they received when seeking services. This may serve as a barrier to care, as highlighted by 36 year old Coral (Arecibo),

"Well...sometimes...Well...you know....they take care of you from a distance [without getting too close, from afar] because they notice, the. That...that you are like on drugs and stuff. Well. And so...I almost never went to the hospital because I always had that fearthat they wouldn't treat me the same so when I did go then...As I said...From a distance. "

Given previous experiences and a perception that they would be treated as different, from afar or "at a distance," many female IDUs chose to forgo service altogether. In addition to felt stigma, participants complained of unreliable payer

systems and unreasonable prices, which further prevented them from seeking the services they needed:

“You know...you have to have a plan that you pay yourself in order to receive services, sometimes not even that. And when you are an addict, it is also less. It’s less help that’s given to you.” (Melissa, 29, Bayamon)

Facilitators to Care. Over half the sample, 18 participants, related feeling very comfortable in their interactions with their primary healthcare providers and seemed to feel secure in that relationship. Participants from the metropolitan area who felt comfortable in their interactions with primary care providers often reported only seeking care from facilities specifically geared towards homeless or IDU populations. When reflecting on the relationship with her primary care provider, one participant reported:

“Yes...well I am a cancer patient and as a cancer patient I have to go to him [the doctor] so I can get a referral to my oncologist. Every time I go he asks me how I am doing and how treatment is going, you know he [primary care provider]worries about me.” (Cynthia, 48, Mayaguez)

Past Experiences Seeking Health Services. Some participants (n=7) reported needing to seek services after starting their rehabilitation process:

“I had already spent 22 years on the street. You know that the anesthesia [xylaxine] tries to numb the body to the point where one does not even get sick. And..Well..when one comes out of that [addiction to xylaxyne]....everything [the body] wakes up....I almost died, I stopped breathing three times and suffered a heart attack and so I was tubed but I don’t remember much from that.” (Coral, 36, Arecibo)

As illustrated in this quote, some participants reported not needing many health services until after they started the rehabilitation process at which point participants described suffering severe health complications as a result of their drug use.

Alternatives to Treatment. Women who reported negative experiences when seeking healthcare services related experiences of being turned away from services in spite of the presence of medical reasons that warranted the services, or being unable to cover the expenses associated with treatment as in the case of Sandra (48) from Bayamon:

“Yes, I even have friends that have stopped seeing a doctor altogether for that same reason. They don’t have enough to cover the deductible so they have opted for leaving treatment.”

Other participants related having to resort to alternative options in order to get the treatment or medications they needed. One example is that of 36 year old, uninsured Frances, who reported being turned away from an emergency room with infected skin abscesses and a very high fever, which in her previous experience had required antibiotics through an IV for seven days in the hospital. When asked about how she was able to manage the situation, even after being turned away from treatment Frances commented that

“Well I ended up having to move around here ‘underneath the table’ [unknown to others] and sending my neighbor to her doctor so she could get the antibiotic prescription I needed so that she could give them to me I could take them but I had to move [make arrangements] so that she would get them in her name.”
(Frances, 36, Caguas)

In short, Female IDUs face multiple barriers in accessing and utilizing healthcare services, including feelings of stigma due to their IDU status and difficulties when trying to access services, mainly due to their socioeconomic status. Participants seemed to evaluate the severity of any given medical situation and decide for themselves if it merited receiving traditional services, in a hospital setting, or if they could find other

treatment options, at times overcoming the initial barriers they had encountered. As a result, we found many participants opted not to receive care or found alternative methods of treatment to manage their health issues, at times furthering their risk.

Sexual Health Awareness

Every participant acknowledged the importance of sexual health as part of a holistic healthy life, although some had a very simplistic understanding of sexual health and its implications: “Sexual health is taking care of yourself while you are having sex” (Veronica, 53, San Juan). Other participants praised prevention, treatment when needed, and above all education as measures to ensure optimum sexual health. One participant reported:

“Well for me, sexual health is about maintaining hygiene in order to remain well-oriented on how to best maintain your intimate parts, if you have an infection you treat it, if you have an intimate problem you treat it...well for me that is what sexual health is about.” (Jenny, 40, Rio Piedras)

On numerous occasions participants within the study expressed mixed feelings about their sexual health, due in part to suffering the consequences, such as infertility, of previous complications from STIs. As highlighted by Andrea (29, Caguas):

“The most important thing for me is that I have not been able to have kids yet because of my syphilis condition that worsened many things for me. Well that....I would give my life to have a child and I will not be able to because it...ruins you and I am only 29 years old you know, it’s not easy. “(Andrea,29, Caguas)

Sexual Education. Many participants (n=16), reported having received some form of sexual health education in elementary and/or middle school. The majority of those participants who reported no previous sexual education in their formative years reported that they referred to peers or family members as mentors. One participant felt

that her peers, and the misinformation she received as an adolescent, were to blame for her current life situation, given that she said she had

“Nobody, nobody at all. That’s why everything that happened in my life happened because I never had anyone that I could go to and say ‘hey, I just got my period, what do I do?’ or ‘hey, I just became a woman for the first time, I had sex, what should I do?’ or ‘hey, you know?’... never. So I experimented everything through friends....” (Melissa, 29, Bayamon)

Attitudes Towards Sexuality. The majority of the sample, 26 participants, expressed that they felt comfortable when discussing their lifetime sexual experiences and understood the importance of sexual health education and self-efficacy

“Ohhh...it's important yeah...you know if I don't take care of myself then who would? You know I have to take care of myself and prevent everything I can...” [Veronica, 53, San Juan]],

and open conversations around sex and sexuality. When asked about comfort levels when discussing sexual health topics, several participants presented responses similar to that given by Frances:

“Relaxed....for me that is something normal, that is no science or taboo. For me that is something that, well, that needs to be talked about. Because if not, then you stay dumb, in a cloud and then after the problem comes of ‘how could this have happened to me?’, ‘how could I have avoided this?’....Searching for information....if you didn’t then that is why you are the way you [anyone struggling with negative consequences of poor sexual health education] are.” (Frances, 36, Caguas)

Few women expressed clear discomfort with discussing their sexuality, and some had written off sex from their lives altogether, particularly given a positive STI or HIV diagnosis. When asked about her sexual health and comfort level with topics around sexuality, Karla (36, Hato Rey) stated that:

“Mine is terrible....because I am infected [Chlamydia] and I get very itchy down there...and the same time I have not treated it and so all that skin was just exposed.”

Others expressed discomfort with sexuality-related topics due to previous traumatic sexual experiences, to discomfort with societal views on their same-sex relationships, or because of general discomfort with sexuality related issues or a consideration of the topic as “too personal.”

Past Experiences Accessing Sexual Health Information. When asked to describe the most recent experience in which they sought sexual health information, participants primarily spoke of their medical doctors or rehabilitation personnel as experts they could turn to in times of need. Martha (36, Arecibo) related that

“Recently I had relations with my husband...I had oral [oral sex] relations with him...and when he was about to come [ejaculate] I saw that his milk [semen] was, like yellow and I went to him [primary care physician] to ask him what that [yellowish color] could be a result of...you understand...I was scared you know and he [primary care physician] oriented me.”

Participants who had difficulty accessing health services, were uninsured or had no primary care provider often reported difficulties accessing sexual health information.

Sexual Health and Drug Initiation. Participants commonly brought up their first experiences with drugs throughout the interview, and described circumstances permeated with both sexual and physical violence as well as manipulation and abuse by male partners and/or family members. One participant reported,

“My brother raped me, when I was 7 years old and...as a result of that my father killed himself and so he [my brother] kept on doing it [rape]. At 14 I could not take it [the abuse] anymore and so I left with a man I did not even want or love.... He looked good and I never thought he used drugs...until one day I realized it and from that day on I started using myself... After what my brother did I told my father and he killed himself as a result. My mom could not help

because my brother hit her and...so you know...what I did was that I left so that would not keep happening.” (Coral, 36, Arecibo)

Others suggested that they learned about and were exposed to drugs through friends, and hinted at sexual benefits as part of what originally introduced them into diverse drugs and IDU:

“Well that I started smoking marihuana with them [friends], cigarettes, then a little snort of coke, then it was ‘hey try this that gets you down and fixes you so that you can have sex and ‘ excuse my language... ‘you don’t come fast’ ...and that was the drug [heroin] that you snort because the effect is quicker.”(Andrea, 29, Caguas)

This theme helped illustrate that although most participants acknowledged the importance of sexual health to their overall health, many reported no previous formal sexual education and some felt visibly uncomfortable when discussing the topic. Those who demonstrated higher comfort levels seemed proactive about continually learning more about their sexual health and reaching out to medical professionals in times of need. For many participants, drug use and sexuality are interconnected because they were introduced to drugs through a sexual partner or because their drug initiation was motivated by the pursuit of longer-lasting or more pleasurable sexual experiences.

DISCUSSION

The main goal of this study was to better understand the factors that influence healthcare access and utilization, as well as sexual health information seeking, among female IDUs in Puerto Rico. Viewed through a transformative theoretical lens, our results suggest that female IDUs face numerous structural, social and internal barriers to accessing health services in Puerto Rico, yet many feel empowered to overcome those barriers, particularly when it comes to accessing sexual health information.

Participants in this study related a variety of difficulties when trying to access healthcare services. Their own experiences as drug users, in addition to previous experiences of stigma when accessing services, served as barriers to treatment. Additionally, many felt unprepared or without enough resources to access the care they needed possibly due to their socioeconomic and educational backgrounds. Our findings echo those in previous qualitative studies with community-based samples of female IDUs in the US which found the issues IDUs face when trying to receive healthcare services include their prioritization of obtaining drugs, feelings of belonging to a stigmatized group and accessibility (Lally et al., 2008). Women's views of themselves as addicts, and the social stigma they may feel as a result, may be a factor in so many participant accounts of unsuccessful rehabilitation (Baral et al., 2014). The day-to-day struggles of overcoming substance addiction, in most cases of various substances at once, may eventually diminish women's self-worth, disempowering them over time. These results reinforce the value of addressing cultural competence among medical and treatment personnel (Varas-Diaz et al., 2012), as well as addressing drug and HIV-related stigma towards IDU communities in Puerto Rico. Healthcare providers working with this population should take the necessary steps to ensure female IDUs are capable of following up with care by increasing rapport, establishing a trusting patient-provider relationship and helping them develop agency in their own recovery and wellness.

Most participants in this study expressed a high level of comfort when discussing sexuality related topics and expressed positive view of the role and importance of sexual health in their lives. These findings challenge conventional depictions of female IDUs as

careless with regards to their sexual health and instead help highlight how much they value access to accurate information and the trust they place on medical professionals to answer questions about and/or address their sexual health issues. Although the majority of participants did not report having received some form of school-based sexual health education, their personal life experiences with drug abuse and rehabilitation seemed to provide many with confidence in their sexual decision-making and their ability to successfully access sexual health information through the limited methods available to them.

Based on findings from this study, a need exists for educational outreach services and research that incorporates educational components leading to greater sexual health awareness and comfort for female IDUs. Furthermore, women who successfully rehabilitate from drug abuse may also, as a result of previous experiences or educational efforts, demonstrate the skills necessary to prevent and escape sexually violent situations. Given their high previous levels of risk and experience within the population, one approach could be that these recovering women may serve as peer educators (Gollub, E.L., 2013) and help promote sexual health, safety and empowerment among female IDUs through the sharing of their own personal experiences. As a result, participants in such interventions may feel empowered to continue on the road to recovery themselves.

Findings reported in this study are from a qualitative component of a larger mixed-methods exploratory study and aim to deepen our understanding of female IDUs experiences accessing health services in Puerto Rico. This study is not without several

limitations. Participants recruited for this study were at various stages of rehabilitation and reported IDU within the past 12 months. Although participants were recruited from multiple locations across the island, the majority were receiving methadone maintenance treatment services in the metropolitan area. Additionally, the results are based on self-reported data and, as such, potential recall bias is possible. The potential for socially desirable response bias has been previously acknowledged (Vlahov & Polk, 1998; Harrison, 1995; Lally et al., 2008) and, although, the researchers ensured that all participants were interviewed by women, in order to increase participant's comfort level, this bias may represent a limitation to this study.

Conclusions

Female IDUs in Puerto Rico face numerous complex challenges when accessing healthcare services and seeking sexual health information. The data suggests that stigma related to IDU status impairs female IDUs' ability to seek services when they need them most, sometimes at the cost of their own health. Additionally, results from this study illustrate the importance of sexual health to the lives of female IDUs and how drug use and rehabilitation can mediate their understanding and experiences of sexuality.

Female IDUs lack reliable sources of information on sexual health and drug abuse and many lack the social and economic resources necessary to change their IDU status. Our findings provide medical professionals, preventive care providers and public health researchers in Puerto Rico with a broader understanding of the issues the female IDU population in the island face when accessing health services and seeking sexual health

information. Further research on female IDUs is necessary in order to understand the differences that may occur in access to services throughout the island, based on geographic location and various alternatives for treatment available, in order to reduce further stigma and discrimination towards this population.

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Table 1. *Sociodemographic & Healthcare Access Characteristics of the Sample (N=35)*

Sample Characteristics	Total Sample (N=35)
	M (SD) n (%)
Age	38.6 (8.197)
Area of Residence	
Metropolitan Area	30 (85.7)
Non Metropolitan Area	5 (14.3)
Education Level	
Elementary School	4 (11.4)
Middle School	8 (22.9)
Less than High School	7 (20.0)
High School	8 (22.9)
Some College	6 (17.1)
Bachelor's Degree or Higher	2 (5.7)
Employment Status	
Unemployed	35 (100.0)
Income (USD)	
Less than \$1,000	33 (94.3)
1,000 – 3,0000	2 (5.7)
Sexual Orientation	
Homosexual/Gay	1 (2.9)
Bisexual	11 (31.4)
Heterosexual/Straight	23 (65.7)
Relationship Status	
Single/Never Married	13 (37.1)
Partnered	19 (54.3)
Married	1 (2.9)
Widowed	2 (5.7)
Homeless	11 (31.4)
Health Insurance	
Insured (Public Insurance or Medicaid)	25 (71.4)
Uninsured	9 (25.7)
HIV/STI Status	
HIV Positive	7 (20.0)
STI Positive	5 (29.4)
Primary Medical Service Provider	24 (68.6)
Received Healthcare Services Past 12 Months	16 (45.7)
OBGYN	13 (37.1)
Mental Health	11 (31.4)
Dental	9 (25.7)
Other	11 (31.4)
STI Test	27 (77.1)
HIV Test	27 (77.1)
Denied Services From a Healthcare Provider (Lifetime)	9 (25.7)

CHAPTER SIX

REFLECTIONS & FUTURE PLANS

My experience as a doctoral student at Indiana University has been unlike anything I could have imagined. The last three years have been a wonderful journey. During my undergraduate education in Puerto Rico, I was always very interested in the social injustices and inequalities that marginalized communities throughout history had experienced. I had mixed feelings about whether to dive into law or medicine, in terms of a career path, as a way to advocate for such communities, until I learned about the field of Public Health. Immediately, as I began to learn more about Public Health and, throughout my Masters education, I became fascinated by researchers whose work centered on bringing light to marginalized populations in hopes of achieving social equality.

Sexual health resonated very closely with me, given my family history in the medical profession in fields closely related to sexual health. Growing up, sexuality, sexual orientation, contraception, and sexual rights were never taboo topics of discussion at the dinner table, as I was encouraged to seek information and learn about topics that seemed confusing and to openly discuss with my family if I had any questions. For my Master's program's last elective course, I chose to enroll in a class taught by Drs. Carmen Milagros Velez and Carlos Rodriguez-Diaz on Public Health and Social Justice for LGBTQI populations. This class forever changed my career direction. These professors taught me the basics of sex research and, more importantly, shared their own research experiences and concerns for the future sexual health of these

communities with such conviction and passion that it forever inspired me to join them and become a sex researcher myself. Carlos was very encouraging and supportive of my interest to pursue further education in sexual health. He introduced me to my first hands-on research experience as a recruiter and interviewer in his ongoing Behavioral Risk Study taking place in the main STI/HIV treatment clinic on the island of Puerto Rico. This experience further solidified my desire to become a researcher. Listening first hand to undesirable experiences related by participants, many as a result of poor or no sexual health education and social misconstructions, motivated me to work towards conducting research that would someday help change those stories.

During my doctoral training at Indiana University, I learned tremendously through my experiences at the Center for Sexual Health Promotion, my research colleagues and mentors, and the many great courses and professors who make it such a wonderful learning environment. Although I began my classes knowing that I wanted my work to focus on Puerto Rico, I struggled a bit with the focus of what my dissertation research project would entail. During my second year, a group of colleagues at the Center worked together with a community-based drug outreach organization on an innovative study looking at sexual behavior in a community of meth users in Montana. This experience inspired me to take a closer look at current drug problems in Puerto Rico, in particular, because of previous experiences with community-based drug outreach organizations in the island, I became very interested in the experiences of IDUs.

In December 2012, I met for the first time with a coordinator within Iniciativa Comunitaria de Investigación (ICI) and started an ongoing conversation about the participants they served, the needs of their population and the viability of a study with their clients. All parties seemed interested and supportive of our proposed plans and, throughout the course of several meetings, coordinators at ICI, the Coalición de Servicios de Salud a Mujeres VIH, and methadone clinic coordinators provided feedback on the methods and recruitment protocols of the study. After IRB was approved, I received research funds for the study through two grants: One from the School of Public Health and another through the Indiana University Office for the Vice President of International Affairs. Although planning sometimes became difficult, due to working in two distinct locations, I always felt strongly supported by our community partners and very much appreciate all their encouragement and their efforts to accommodate us within their clinics to ensure the ongoing success of the study.

Lessons Learned

What worked well? This project was very unique in that it was able to reach 90 active female IDUs, a population known to be hard to reach in a research setting. Moreover, researchers were able to recruit from both outside as well as inside the metropolitan areas of Puerto Rico, which adds to the literature a unique look at female IDUs across the island. The survey was able to capture information on lifetime sexual behaviors and the most recent sexual event, as well as details on previous experiences of sexual violence. This information will provide basic data necessary in order to customize interventions aimed at reducing risks of violence or increasing adherence to

health treatment programs for female IDUs in Puerto Rico. Furthermore, participation in the recruitment efforts for this study demonstrated that women on the island are in great need of services, particularly services related to drug rehabilitation and treatment. As a result of this project, I connected with many community organizations and service providers whom I can continue working with in future collaborations with IDU and substance-using populations on the island.

What could have worked better? As with any other study, there are many lessons to learn as a result of working on this project. First, I learned to never undervalue the importance and contributions of community partners, particularly when, as a researcher, I had little previous experience with the population of interest. Although many meetings were held to discuss the details of our agreements, given that this project was developed thousands of miles away from where participant recruitment was taking place, sometimes there was miscommunication between the parties. Furthermore, given the multiple recruitment venues and limited time frames, at times it became difficult to accommodate and reach all the participants as expected.

Secondly, I learned to plan ahead for all possible circumstances, in particular when working with studies abroad. Holidays, weather events, and illnesses all became issues at certain points throughout the data collection process. In the future, I intend to conduct small pilot studies with the populations of interest, in order to fully grasp the extent of my reach within the population and the ways in which the data I collect could be most useful for the community. Furthermore, more financial incentives for participants may have facilitated recruitment; I will make sure to work towards

acquiring grants that will allow me to continue my work within this population in Puerto Rico. I am very proud of what was accomplished with this exploratory study, and I am very grateful to everyone who was supportive of my desire to pursue it in spite of all the logistic limitations it entailed.

My experience at Center for Sexual Health Promotion

When I arrived at the Center for Sexual Health Promotion, I had limited research experience but a great desire to learn. I am very grateful to Michael Reece, Debby Herbenick, Brian Dodge, and Vanessa Schick for giving me the amazing opportunity to learn and grow as a sex researcher with the greatest in the field. The opportunity to become involved with numerous ongoing studies at every stage of the research process is something all who work at the Center appreciate very much, given how rare it is to get so many first-hand experiences as students. I have been exposed to a wide range of methodologies and approaches to sex research. While I intend to tailor my methodological approach to the needs of each study, I already can conceptualize studies and methodologies differently as a result of my experiences at the Center.

I am very grateful to all my mentors at the Center for their guidance, as well as for sharing their experiences as sex researchers and sexual health educators with us. In particular, their sex-positive approach and their commitment to improving access to sexual health information for all communities, including those underserved, has been an inspiration and model to follow in my own career. I will make all efforts to disseminate my work in ways that reduce stigma and increase comfort with sex and sexuality across populations. I hope to also continue what I have learned at the Center and apply a sex-

positive approach in my future conceptualization of studies, particularly with marginalized populations. I will take with me many important skills and lessons learned, and I hope to continue the legacy of the Center's innovative work towards improving sexual health for all.

Career Trajectory

I am very excited about having started my new position as a tenure-track Assistant Professor of Health Sciences at James Madison University (JMU) this fall. This position will allow me to further develop my teaching and research skills, as well as to nurture future collaborations with my new colleagues within the Department of Health Sciences at JMU. One of the main reasons that I am excited about this new position is the many opportunities for continued research in Puerto Rico, as well as JMU's interest of developing study abroad courses on the island, under my instruction. Given all the new connections I have made with health service providers on the island as a result of this study, in addition to my own connections in the University of Puerto Rico's School of Public Health and with the many medical providers on the island, I am certain that I will be able to foster relationships that will help facilitate further sexual health research in Puerto Rico. I hope to also continue to build my research trajectory and work towards achieving tenure and providing services to academic and health organizations.

As a start, I will immediately begin working on developing for publication manuscripts that will include data from this study, as well as securing grant funding and conceptualizing further studies as follow up to this dissertation. I strive to continue to

engage in meaningful work, both in academia and social service, which makes a contribution to people's full enjoyment of their sexual lives.

Future Research

As I continue my work on this project, I hope to expand the research on IDUs and other minority substance-using populations in Puerto Rico in order to further help mitigate the negative effects of the country's current drug abuse epidemic. The main areas I would like to pursue in this topic include the experiences of male IDUs on the island, an examination of health providers on the island, and health providers' recommendations for increasing healthcare utilization among IDU populations. Further studies focusing on sexual minorities within the IDU population are necessary, given the few resources available for them in Puerto Rico. Additionally, I would like to conduct Internet surveys and further qualitative studies to better understand the intersections between substance use and sex for Latino communities in Puerto Rico, the US, and abroad.

Male IDUs. Subsequent research should focus on the experiences of male IDUs on the island, in particular with regards to their experiences of sexual violence, multi-drug use, and overall protective factors as they engage in numerous risk behaviors. During my experience visiting health service providers as part of my recruitment efforts, I noticed the amazing amount of men who have been active IDUs for 15, 20, even 40 years. I believe we are only beginning to understand the complexity of drug addiction and its effects on everyday life, particularly as it relates to sexual behavior and how it may vary throughout the lifespan. I would like to conduct similar multi-method studies

with male populations on the island, as well as studies focusing on couples – those where only one partner is an IDU, as well as those where both are IDUs -- and how their experiences differ when navigating their sexual life. I hope to also qualitatively explore male experiences of sex work and sexual violence as a result of their IDU status and their methods for coping and accessing services after such experiences.

Health Service Providers. Through in-depth interviews and program evaluations, I hope to gather sufficient data in order to make informed recommendations on how to improve the provision and utilization of health services on the island for IDU populations. As a result of my numerous conversations with physicians, nurses, service providers, and clinic coordinators, I understand there is a great need on the island both for services that are able to reach populations outside the metropolitan areas and for the allocation of funds to provide such services. Through careful evaluation of the diverse public and private organizations that currently provide services to IDU populations, I hope to highlight the areas that are most in need of funding and/or re-conceptualization in order to provide more comprehensive, holistic services and better reach this population in such need of tailored services.

Conclusion

The overarching goal of my dissertation was to further understand the experiences accessing health services of Puerto Rican female IDUs', a population that remains in many aspects hidden although at very high risk. Additionally, this mixed-methods study attempted to capture data on sexual health, drug use, and sexually

violent experiences, in order to better identify areas of need for further research with these populations.

Research into the relationship between sexual behaviors, drug use, and sexual violence is still in its early stages. Further studies that focus on how these interactions vary across populations and types of substances is necessary in order to educate about and prevent against sexual violence and avoid the spread of HIV and STIs. Ultimately, results from this study may help drug treatment and prevention service providers in Puerto Rico better reach female IDUs and expand available services to include sexual health education and sexual violence prevention components.

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APPENDICES

Appendix 1: Selected Measures

Phase 1 – Survey Measures

Socio-demographics

- Age, race/ethnicity, education, housing, employment, income, care giving
- Pregnancy History

Drug Use History

- Assessment of substance use by drug type, past 30 days & past 12 months
- DAST-10 scores
- Age & Substance – First IDU Experience
- Time Since & Substance – Last IDU Experience

Relationships and Sexual Behaviors

- Sexual orientation
- Lifetime sexual behaviors (partnered and solo)
- Event level measures for most recent sexual experience
- Relationship items for most recent partner
- Drug and alcohol use at most recent sex event
- Lubricant use at most recent event
- Pain experiences at most recent event

Healthcare Access & Utilization

- STI/HIV Testing History
- STI/HIV Status

Experiences of Sexual Violence

- Modified SES-Shot Form

Incarceration History

Phase 2 – Structured Interview

Introduction

- Personal Hobbies, Interests, Goals, Family Life

Access to Healthcare Services

- Previous experience accessing healthcare services with/without insurance
 - o Would you say your health needs were met when you needed them to?
- Impression of relationship with primary care provider (Trust, Quality of previous experiences)
- Last experience with primary care provider / accessing services
- Previous difficulties accessing health services
 - o In the case of a negative experience accessing health services in your past, what measures did you take in order to get the services/treatment you needed?
 - o What could have been done to avoid such an experience?

Sexual Health

- Definition of sexual health
 - o Meanings
 - o What does it include?
 - o Three most important sexual health needs and concerns
- Comfort level asking or discussing about issues regarding sexual health
 - o Who do you feel comfortable with?
 - o Is there anyone with whom you feel uncomfortable?
 - o What could be done to make you feel more comfortable? [With your partner /healthcare provider, etc.]
- Sources of sexual health information during childhood/adolescence
- Current sexual health information sources
 - o Could you tell more about your experiences seeking sexual health information in the past?
 - o Could you give me an example of the most recent time you were seeking sexual health information?

- Sexual health importance within overall health
 - How important would you say sexual health is among all other dimensions of health in your life?
 - Which of all the health dimensions you mentioned is most important to you and why?

Appendix 2: Puerto Rico Sexual Health Resources Guide

RAINN

Línea telefónica gratuita especial para las víctimas de agresión sexual: 1-800-656-4673
San Juan, 787-723-3500 - Carolina, 787-791-1034 - Cayey, 787-263-6473 –
Humacao, 787-852-7265 - Juncos, 787-734-5511
Vega Alta, 787-883-1884
www.rainn.org

CENTRO DE ORIENTACIÓN MUJER Y FAMILIA, INC.

Servicio: Servicio Ambulatorio a víctimas de violencia doméstica, agresión sexual y acecho. Educación y Prevención a jóvenes y a la comunidad en temas de violencia doméstica, agresión sexual y acecho. Horario: lunes a viernes 8:00 AM - 12:00 PM 1:00 PM - 4:00 PM
Teléfono: 787-263-1425 Facsímile: 787-263-2114 Oficina: 787-548-0353
E-mail: mujeryfa@coqui.net Dirección: Calle Sánchez 107, Cayey, PR 00736
Contacto: Inés León Núñez

A FLOR DE PIEL, INC.

Servicios: Vivienda transitoria para ex - confinadas.
Horario: lunes a viernes 8:00 AM – 5:00 PM
Teléfono: 787-310-8983 / 787-645-3192 Facsímile: 787-782-9026
E-mail: puente@coqui.net
Dirección: PO Box 363171 San Juan, PR 00936-3171
Contacto: Raquel Puente, Directora Ejecutiva

ATRÉVETE, INC.

Servicios: Programa de Prevención de la violencia doméstica y acecho sexual entre parejas jóvenes, talleres creativos, proyectos socio culturales a la Comunidad del Residencial Luis Llórens Torres.
Horario: lunes a viernes 8:00 AM – 5:00 PM
Teléfono: 787-268-5445 Facsímile: 787-268-5445
E-mail: sarideltgado@hotmail.com Dirección: PO Box 6783 San Juan, PR 00914-6783
Contacto: María Oquendo Romero, Directora

CASA PROTEGIDA JULIA DE BURGOS, INC.

Servicios: Albergue, servicio ambulatorio, intercesoría legal y apoyo psicosocial en los tribunales de las Regiones Judiciales de Carolina y Ponce. Horario: lunes a viernes 8:00 AM – 5:00 PM (Servicio Ambulatorio) Albergue 24 horas

Teléfonos: 787-723-3500 San Juan Línea 24 horas

787-273-0132 Centro Mujer a Mujer

787-768-5755 Carolina

787-284-4303 Ponce 787-842-1843 Ponce

Facsímile: 787-725-8580

787-273-0797 Centro Mujer a Mujer

Tribunales: 787-548-0413 Carolina

787-548-0414 Ponce

787-548-0810 Río Grande

787-887-5555

787-548-0415 Albergue Ponce

787-984-5443 Albergue Ponce

787-548-0416 Albergue San Juan

787-548-0279 Albergue Aguadilla

E-mail: casajulia@coqui.net

Dirección: PO Box 362433 San Juan, PR 00936-2433

Contacto: Gloria Cruz, Directora Ejecutiva

CENTRO DE LA MUJER DOMINICANA, INC.

Servicios: Prevención y educación sobre la violencia doméstica y agresión sexual.

Representación legal a mujeres inmigrantes víctimas de violencia doméstica y agresión sexual.

Horario: L-V 8:00 AM – 5:00 PM

Teléfono: 787-772-9251

Facsímile:

787-772-9251

E-mail: cemud@prmail.net

Dirección: PO Box 20068, San Juan,

PR 00928

Contacto: Romelinda Grullón, Administradora y Coordinadora de Alcance Comunitario

CENTRO DE ORIENTACIÓN MUJER Y FAMILIA, INC.

Servicio: Servicio Ambulatorio a víctimas de violencia doméstica, agresión sexual y acecho. Educación y Prevención a jóvenes y a la comunidad en temas de violencia doméstica, agresión sexual y acecho. Horario: lunes a viernes 8:00 AM - 12:00 PM 1:00 PM - 4:00 PM

Teléfono: 787-263-1425 Facsímile:

787-263-2114 Oficina: 787-548-0353

E-mail:

mujeryfa@coqui.net

Dirección: Calle Sánchez 107, Cayey, PR 00736 Contacto: Inés León Núñez

CLÍNICA DE SALUD MENTAL DE LA COMUNIDAD, INC.

PROGRAMA DE VIOLENCIA DOMÉSTICA - UNIVERSIDAD CARLOS ALBIZU

Servicios: Servicio ambulatorio de evaluación, psicoterapia y consejería a víctimas de violencia doméstica y agresión sexual.

Horario: lunes a jueves 8:00 AM -8:00 PM viernes 8:00 AM -3:00 PM sábados 9:00 AM - 5:00 PM

Teléfonos: 787-725-6500 ext.107 y 117 787-724-2222 787-724-2272

Facsimile: 787-977-4833 E-mail: cgonzalez@sju.albizu.edu

Dirección: PO Box 9023711, San Juan, PR 00902-3711 Contactos: Dra. Carmen González Magaz Directora Programa de Violencia Doméstica

COORDINADORA PAZ PARA LA MUJER

Servicios: Adiestramiento para desarrollo empresarial, autogestión y talleres de desarrollo personal. Coalición de Organizaciones Comunitarias que brindan servicios a las mujeres, proveen educación a la comunidad, asistencia técnica y apoyo a programas que proveen servicios a las mujeres a través de toda la Isla. Horario: lunes a viernes 8:00 AM – 5:00 PM

Teléfono: 787-281-7579

Facsimile: 787-767-6843

E-mail: pazmujer@prtc.net alcance@prtc.net

Dirección: Apartado 193008, San Juan, PR 00919-3008

Contacto: Vilma González

Coordinadora de Planificación y Desarrollo

CREATE, INC.

Servicios: Prevención y Educación a jóvenes sobre temas de violencia doméstica y agresión sexual. Horario: lunes a viernes 8:00 AM – 5:00 PM Teléfono: 787-756-6761 787-765-9099

Facsimile: 787-754-1024

E-mail:

createpr@terra.com

Dirección: PO Box 190969 San Juan, PR 00919-0969

Contacto: Brenda L. Santos Hernández

Directora Ejecutiva

Appendix 3: IRB Approval

To: BRIAN MARK DODGE APPLIED HEALTH SCIENCE

From: IU Human Subjects Office of Research Administration – Indiana University

Date: June 19, 2013

RE: EXEMPTION GRANTED

Protocol Title: Access to Healthcare Services, Sexual Aggression Experiences and HIV-Related Risk Behaviors Among Puerto Rican Female Injection Drug Users

Protocol #: 1306011653

Funding Agency/Sponsor: Indiana University School of Public Health

IRB: IRB-IUB, IRB00000222

Your study named above was accepted on June 19, 2013 as meeting the criteria of exempt research as described in the Federal regulations at 45 CFR 46.101(b), paragraph(s) (2) . This approval does not replace any departmental or other approvals that maybe required. As the principal investigator (or faculty sponsor in the case of a student protocol) of this study, you assume the following responsibilities:

Amendments: Any proposed changes to the research study must be reported to the IRB prior to implementation. To request approval, please complete an Amendment form and submit it, along with any revised study documents, to irb@iu.edu. Only after approval has been granted by the IRB can these changes be implemented.

Completion: Although a continuing review is not required for an exempt study, you are required to notify the IRB when this project is completed. In some cases, you will receive a request for current project status from our office. If we are unsuccessful at in our attempts to confirm the status of the project, we will consider the project closed. It is your responsibility to inform us of any address changes to ensure our records are kept current. Per federal regulations, there is no requirement for the use of an informed consent document or study information sheet for exempt research, although one may be used if it is felt to be appropriate for the research being conducted. As such, these documents are returned without an IRB-approval stamp. Please note that if your submission included an informed consent statement or a study information sheet, the IRB requires the investigational team to use these documents. You should retain a copy of this letter and any associated approved study documents for your records. Please refer to the project title and number in future correspondence with our office.

Additional information is available on our website at <http://researchadmin.iu.edu/HumanSubjects/index.html>.

Curriculum Vitae

Erika M. Collazo-Vargas, PhD, MPH

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A. EDUCATION

2011-2015

Doctor of Philosophy (PhD)

Major: Health Behavior

Minors: Qualitative Methods, Health Policy

GPA: 3.88

Department of Applied Health Science

School of Public Health-Bloomington

Indiana University

Bloomington, Indiana

Advisor: Brian Dodge, PhD

2009-2010

Master of Public Health (MPH)

GPA: 3.55

Graduate School of Public Health

University of Puerto Rico

Medical Sciences Campus

San Juan, Puerto Rico

2005-2009

Bachelor of Arts (BA)

Major: Pre-Law

GPA: 3.58

Humanities Department

University of Puerto Rico, Rio Piedras Campus

Graduated with Honors: Magna Cum Laude

B. ACADEMIC APPOINTMENTS

2014-Present

Assistant Professor

Department of Health Sciences

College of Health and Behavioral Studies

James Madison University

2011 – 2014

Project Coordinator

Center for Sexual Health Promotion

Indiana University Bloomington

2011 – 2014

Associate Instructor

Applied Health Science, School of Public Health
Indiana University Bloomington

C. PUBLICATIONS

In Press

Rodriguez-Diaz, C.E., **Collazo, E.**, Roman-Rivera, A., Candelaria- Rosa, E., Colon, M., Dodge, B., & Herbenick, D. (2014) "Sexplorando": Sexual Practices and condom use among an Internet-based sample of men and women in Puerto Rico. *Journal of Sexual Medicine*

Butler S., Smith, N.K., **Collazo, E.**, Caltabiano, L., & Herbenick, D. (2014) "Pubic Hair Preferences, Reasons for Removal, and Associated Genital Symptoms: Comparisons between Men and Women". *Journal of Sexual Medicine*

Manuscripts Under Review

Collazo, E., Rodriguez-Diaz, C.E., Roman-Rivera, A., Candelaria- Rosa, E., Colon, M., Dodge, B., & Herbenick, D. (Under review) Anal Sex Practices in an Internet-Based Sample of Adult Men and Women in Puerto Rico

Butler S., Smith, N.K., **Collazo, E.**, Caltabiano, L., & Herbenick, D. Genital Self-Image and Considerations of Elective Genital Surgery: Results from College-Based Men and Women

Schick, V., Rosenberger, J., Herbenick, D., **Collazo, E.**, Sanders, S., & Reece, M. (Under review) The behavioral definitions of 'sex with a man' and 'sex with a woman' identified by women who have engaged in sexual activity with both men and women: Implications for public health research, practice and policy.

In Preparation

Barnhart, K., **Collazo, E.**, & Herbenick, D. "Love. Fun. The baby was asleep" reasons for sex across the lifespan.

D. REFEREED RESEARCH PRESENTATIONS

Collazo, E., Dodge, B., Herbenick, D., Guerra-Reyes, L., Mowatt, R., Rodriguez-Diaz, C. Sexual Aggression and Victimization among a Sample of Puerto Rican IDU Women. 2014 Annual Meeting of the American Public Health Association. New Orleans, LA.

Barnhart, K., **Collazo, E.**, & Herbenick, D. "Love. Fun. The baby was asleep" reasons for sex across the lifespan. 2014 Annual Meeting of the Society for the Scientific Study of Sexuality. Omaha, NE.

Lewis, A., Sutton, D., Ford, D., **Collazo, E.** "The Naked Truth – Racism and Cultural Bias on the bool, We Are All Racists: The Truth about Cultural Bias, by Allen Lewis". Annual Africana Studies Conference 2014. James Madison University. Harrisonburg, Va.

Caltabiano, L., Butler S., Smith, N.K., **Collazo, E.**, & Herbenick, D. (2014). Sexual behaviors and sexual functioning among college men and women. Intersections in Gender & Sexuality. Lawrenceville, GA.

Baldwin, A.M., Smith, N.K., Herbenick, D.L., Barnhart, K.J., **Collazo, E.**, Hubach, R.D., Goeders, N., & Cornett, E. (November, 2013). Drug use motivations and group sexual practices among rural methamphetamine users. 2013 Annual Meeting of the Society for the Scientific Study of Sexuality. San Diego, CA.

Baldwin, A., Smith, N.K., Herbenick, D., Barnhart, K., Hubach, R. D., **Collazo, E.**, Goeders, N., & Cornett, E. (November, 2013). Group sexual practices and motivations for using methamphetamine among rural men and women. 2013 Annual Meeting of the American Public Health Association, Boston, MA.

Barnhart, K.J., Smith, N.K., Herbenick, D.L., Baldwin, A.M., **Collazo, E.**, Hubach, R.D., Goeders, N., & Cornett, E. (November, 2013). Intimate partners and methamphetamine: Drug use technique. 2013 Annual Meeting of the Society for the Scientific Study of Sexuality. San Diego, CA.

Collazo, E., Smith, N.K., Barnhart, K., Herbenick, D., Goeders, N., Cornett, E. (November, 2013). Experiences of sexual aggression and victimization among a sample of rural methamphetamine users. 2013 Annual Meeting of the Society for the Scientific Study of Sexuality. San Diego, CA.

Collazo, E., Smith, N.K., Herbenick, D., Barnhart, K., Baldwin, A., Hubach, R. D., Goeders, N., & Cornett, E. (November, 2013). Sexual aggression and victimization among a sample of rural methamphetamine users. 2013 Annual Meeting of the American Public Health Association, Boston, MA.

Smith, N.K., Herbenick, D., Barnhart, K., **Collazo, E.**, Hubach, R. D., Goeders, N., & Cornett, E. (November, 2013). Pleasure-seeking motivations and sexual function of women who engage in sex while using methamphetamine. 2013 Annual Meeting of the Society for the Scientific Study of Sexuality. San Diego, CA.

Smith, N.K., **Collazo, E.**, Butler S., Caltabiano, L., & Herbenick, D. (November, 2013). Genital self-image, pubic hair preferences, and sexual behavior: A cross-gender comparison among college men and women. 2013 Annual Meeting of the Society for the Scientific Study of Sexuality. San Diego, CA.

Smith, N.K., Herbenick, D., Barnhart, K., **Collazo, E.**, Hubach, R. D., Goeders, N., & Cornett, E. (November, 2013). Sexual and reproductive health behaviors of rural women who engage in sex while using methamphetamine. 2013 Annual Meeting of the American Public Health Association, Boston, MA.

Collazo, E., Smith, N.K., Butler S., Caltabiano, L., Herbenick, D. (November, 2012). Genital self-care practices and genital self-image of male and female college students. Annual meeting of the Society for the Scientific Study of Sexuality, Tampa, FL.

E. GRANTS AND FUNDING

October 2013	Professional Development Grant: \$1000 Office of Diversity and Inclusion School of Public Health – Bloomington Indiana University
April 2013	Indiana University Office for the Vice President of International Affairs Pre-Dissertation Summer Travel Grant: \$1,600
January 2013	School of Public Health Research Grant-in-Aid: \$975 Project: Access to Healthcare Services, Sexual Aggression Experiences and HIV-Related Risk Behaviors among Puerto Rican Female Injection Drug Users
October 2012	School of Public Health Travel Grant-in-Aid: \$300 Annual meeting of Society for the Scientific Study of Sexuality

F. ASSISTANTSHIPS & FELLOWSHIPS

2013-2014	Doctoral Dissertation Fellowship: \$4,600 Department of Applied Health Science School of Public Health-Bloomington, Indiana University
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2013-2014	Doctoral Assistantship: \$ 9,375 Department of Applied Health Science School of Public Health-Bloomington, Indiana University
2012-2013	Doctoral Assistantship: \$9,375 Department of Applied Health Science School of Public Health-Bloomington, Indiana University
2011-2012	Doctoral Assistantship: \$9,075 Department of Applied Health Science School of Public Health-Bloomington, Indiana University

G. SERVICE

A. University Service

James Madison University

2014	Complementary and Alternative Medicine Lecturer Promotores de Salud Program, Institute for Health and Human Services
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Indiana University Bloomington

2012	Online Videoconference Presenter International Outreach Council Joint Area Studies
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B. Professional Service

National Service

2014	Manuscript Reviewer American Journal of Sexuality Education
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2014	Textbook Reviewer New Dimensions in Women's Health, Sixth edition Jones & Bartlett
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2014	Abstract Reviewer Family Violence & Prevention Caucus Student Assembly Annual Meeting, New Orleans, Louisiana
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*American Public Health Association
Annual Meeting, Omaha, Nebraska
Society for the Scientific Study of Sexuality*

2013 **Review Committee Member**
HIV/AIDS Section Awards
Annual Meeting, Boston, MA
American Public Health Association

2012-2013 **Student Ambassador**
Annual Meeting for the
Society for the Scientific Study of Sexuality
Tampa, FL

Regional Service

2013 **Volunteer Tour Guide**
Kinsey Institute
Indiana University, Bloomington, IN

2012 **Interviewer & Consultant**
Latino Health Assessment, Bienestar Project
Indiana University Health

2012 **Scientific Session Moderator**
Eastern and Midcontinent Joint Regional meeting for the Society
for the Scientific Study of Sexuality
Indiana University, Bloomington, IN

2012 **Abstract Reviewer**
Midcontinent Regional Conference
Indiana University, Bloomington
Society for the Scientific Study of Sexuality

2011 –2014 **Latino Sexual Health Community Consultant**
Center for Sexual Health Promotion
Indiana University

2011 –2014 **Translator** (English – Spanish)
Pure Romance Training, Kinsey Confidential
Resources Online

2010–2011

Volunteer Interviewer/Caller

Center for Evaluation and
Sociomedical Research Division of Global Health, Medical
Campus, University of Puerto Rico

H. TEACHING EXPERIENCE

A. Undergraduate Courses Independently Taught

Fall 2014, HTH 408 – Health Research Methods, Department of Health Sciences, James Madison University, Instructor of Record for 20 students

Fall 2014, GHTH 100 – Personal Wellness, Department of Health Sciences, James Madison University Instructor of Record for 80 students

Fall 2014, GHTH 100 – Personal Wellness, Department of Health Sciences, James Madison University Instructor of Record for 80 students

Summer 2014, SPH H305 – *Women's Health*, Department of Applied Health Science, Instructor of Record for 24 students

Spring 2014, SPH F255 – *Human Sexuality*, Department of Applied Health Science Instructor of Record for 80 students

Fall 2013, SPH F255 – *Human Sexuality*, Department of Applied Health Science, Instructor of Record for 77 students

Summer 2013, SPH H305 – *Women's Health*, Department of Applied Health Science, Instructor of Record for 12 students

Spring 2013, SPH F255 – *Human Sexuality*, Department of Applied Health Science, Instructor of Record for 85 students

Fall 2012, SPH H263 – *Personal Health*, Department of Applied Health Science, Instructor of Record for 79 students

Summer 2012, SPH H263 – *Personal Health*, Department of Applied Health Science, Instructor of Record for 13 students

Spring 2012, SPH F255 – *Human Sexuality*, Department of Applied Health Science, Instructor of Record for 98 students

Fall 2011 SPH H263 – *Personal Health*, Department of Applied Health Science, Instructor of Record for 89 students

B. Graduate Assistant

Spring 2013, SPH F255 – *Human Sexuality*, Department of Applied Health Science, 86 students

Spring 2012, SPH H306– *Men’s Health*, Department of Applied Health Science, 120 students

C. Invited Guest Lectures

Topic: Human Sexuality	Classes: Stress Management, Personal Health
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Topic: Healthy Relationships	Classes: Human Sexuality, Personal Health
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Topic: Conception, Pregnancy, Childbirth and Abortion	Classes: Human Sexuality, Personal Health
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Topic: STI’s and HIV/AIDS	Classes: Human Sexuality, Personal Health
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Topic: Complementary and Alternative Medicine	Classes: Stress Management, Personal Health
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I. ATTENDANCE IN PEDAGOGICAL WORKSHOPS

“First Day of Class: So What’s the Big Idea?” (Fall 2013) Provided by the Center for Innovative Teaching and Learning, Indiana University: Bloomington, IN.

“Engaged Discussions in the Humanities and Social Sciences.” (Fall 2013) Provided by the Center for Innovative Teaching and Learning, Indiana University: Bloomington, IN.

“Grading Student Work More Efficiently” (Fall 2013) Provided by the Center for Innovative Teaching and Learning, Indiana University: Bloomington, IN.

“Advanced Oncourse Tools for Teaching and Learning.” (Fall 2013) Provided by the Center for Innovative Teaching and Learning, Indiana University: Bloomington, IN.

“Constructing Learning Objectives and Course Goals” (Fall 2011) Provided by the Department of Applied Health Science, School of Public Health, Indiana University: Bloomington, IN.

“A Discussion of Student Engagement Strategies” (Fall 2011) Provided by the Department of Applied Health Science, School of Public Health, Indiana University: Bloomington, IN.

“Teaching Portfolios: Documenting and Reflecting on Teaching Practices” (Fall 2011) Provided by the Center for Innovative Teaching and Learning, Indiana University: Bloomington, IN.

J. RELATED PROFESSIONAL EXPERIENCE

2008-2011 **Medical Office Assistant/ Insurance Data Entry and Patient Billing**
Margarita Vargas MD, Psychiatric Practice
Caguas, Puerto Rico

K. PROFESSIONAL ASSOCIATIONS

2011- Present Society for the Scientific Study of Sexuality (SSSS)

2012- Present American Public Health Association (APHA)

L. CERTIFICATIONS

2013 Certified in First AID/CPR

M. LANGUAGES SKILLS

- Native Spanish Speaker
- Fluent in English
- Proficient in French